

BUILDING DESIGN & CONSTRUCTION

DECEMBER 1988

*BD&C's exclusive Owner/Developer 300:
Tenth annual report on construction and
reconstruction activity by the leaders*

*Technology: GFRC provides lightweight,
versatile cladding system*

BUILDING DESIGN & CONSTRUCTION

VOL. 29, NO. 12

THE MAGAZINE FOR THE BUILDING TEAM

DECEMBER 1988

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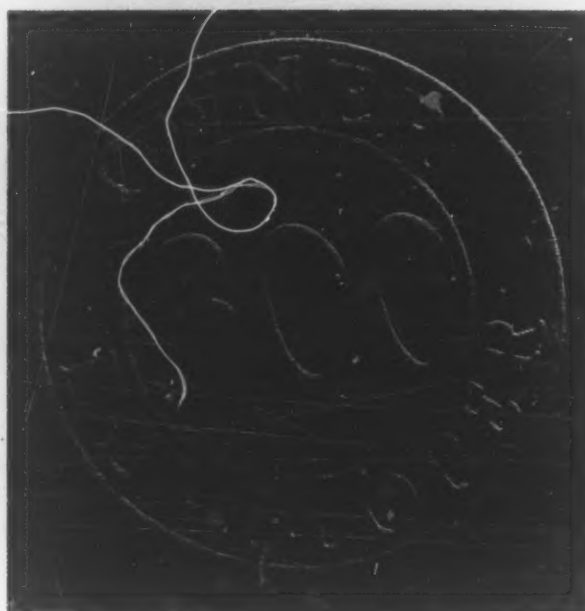
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Is the construction dive bottoming out?

By Christopher Olson, Managing Editor

The answer to the question above is a cautious "yes," at least collectively for the nation's 300 largest firms and agencies included this year in BD&C's 10th annual Owner/Developer survey.

As a group, the Owner/Developer 300 put in place a total of some \$53.58 billion of construction during 1987. This represents a decline of roughly 3 percent in current dollars from the construction reported by last year's 300 for 1986, which was in turn a 3 percent decline from 1985's total. However, this year's 300 group is projecting an upbeat construction total of \$55.77 billion for the current year, which would represent a 4 percent increase in current dollars. Based on data from the U.S. Department of Commerce, Cahners Economics is projecting a 3.9 percent (1.3 percent in constant 1982 dollars) overall increase in spending for commercial, industrial and institutional buildings in 1988.

Such optimism is not distributed equally, however, among the firms listed in the survey's seven different categories, which include Diversified Developers (80 members), Retail Developers (30), Industrials (50), Multifamily Developers (30), Hotels/Motels/Restaurants (40), Government Agencies (50) and Health Care Developers (20). The Diversified Developers, who are the group most affected by widespread office vacancies, are anticipating a decline of about 1 percent for 1988, a considerable improvement over the 11.5 percent

decrease reported by this group for 1987.

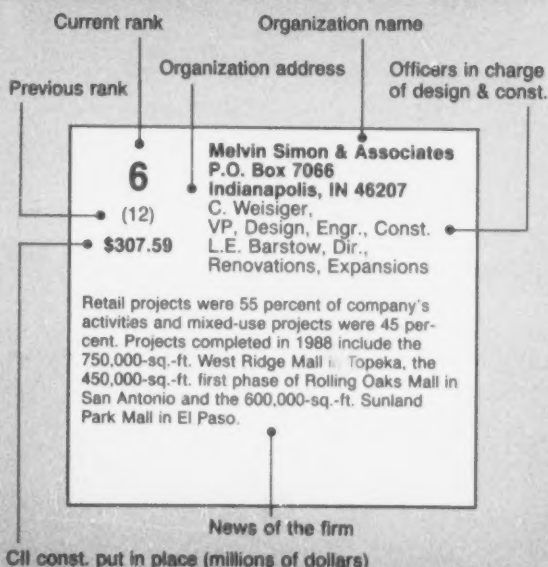
In contrast to the Diversified Developers, the Retail Developers are collectively anticipating a 44 percent rise in construction spending during 1988, after a gain of only about 5 percent in 1987. The bulk of the former increase, however, is accounted for by substantial increases in the construction of three of the largest developers in the category: Melvin Simon & Associates, Albertson's Inc. and Leo Eisenberg Co. The remaining members of this category who provided projections for 1988 are reporting an average increase of only 2.5 percent. The top-ranked firm in this year's survey is Dayton Hudson Corp., which opened a record 104 new stores in 1987, resulting in a 21 percent expansion of the firm's total retail space.

Despite a comparatively healthy demand in some markets for certain types of industrial space, the 50 members of the Industrials category spent 4 percent less on facilities construction in 1987, and they are expecting a further decline of 11 percent in 1988. Both a continued need to increase efficiency via facilities consolidation as well as the effects of merger mania may have contributed to lesser construction expenditures by this group. A full one-quarter of this year's Industrials reported major mergers or acquisitions during 1987, a trend that may be siphoning away funds for construction.

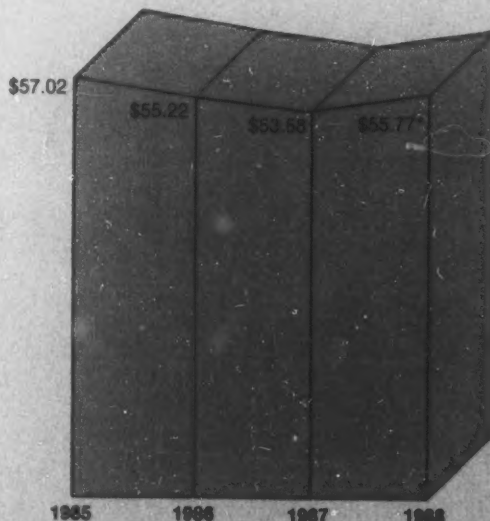
The eight firms representing the aerospace industry posted a 12 percent increase in construction for 1987, the largest of any group within the Industrials category. The pharmaceutical, chemical, computer and electronics groups also reported increases, while construction by the automobile, tobacco, and food and beverage groups waned.

Despite a well-publicized glut of hotel rooms, segmentation continues to drive construction by some of the country's largest lodging firms, which are listed in the Hotels/Motels/Restaurants category. The most active markets have proven to be luxury, all-suite hotels and limited-service, budget motels. In 1987 Holiday Corp. developed its extended-stay concept, introducing the Homewood Suites chain in early 1988. Marriott Corp. is building a chain of full-service, all-suite properties named Marriott Suites and a chain of

How to Read the Owner/Developer 300



Total Construction Spending by Owner/Developer 300 (Billions of dollars)



*Projection based on weighted average of responses received

budget motels named Fairfield Inns. Holiday Corp.'s construction volume is expected to rise from \$897 million in 1987 to \$1.09 billion in 1988, while Marriott's will climb from \$546 million to \$712 million.

The Multifamily Developers and Government Agencies are making the most stable projections of 1988 construction among the firms listed in this year's survey. After a significant decline of 17 percent for 1987, the Multifamily Developers expect a marginal increase of less than 2 percent for 1988. Overbuilding during the 1983 to 1986 period as well as unfavorable implications from the 1986 federal tax act continue to affect the construction of multifamily housing.

The 50 Government Agencies spent a total of \$15.26 billion for building construction during 1987, nearly an 8 percent increase over 1986's total. However, this group is anticipating an increase of less than 2 percent for the current fiscal year. In an effort to reduce the higher cost of public construction, the Government Agencies continue to experiment with different delivery methods, especially for smaller projects. This year the members of this category reported that 42 percent had made some use of construction management and another 31 percent of design/build, increases respectively of 5 and 8 percent.

Renovation and expansion of existing facilities rather than the construction of new ones constituted the first priority in 1987 for many of the Health Care Developers. Humana Inc., for example, reported that it is focusing its efforts on the expansion and renovation of existing facilities in the Southwest and Southeast. Nevertheless, the members of this group are expecting to rebound with a 23 percent increase in construction spending in 1988, which would follow a slight decline of roughly 6 percent in 1987, when the value of construction put in place totaled \$1.47 billion.

A new type of facility under development in the health care industry is the outpatient medical mall. Hospital Corp. of America is developing medical malls that include laboratory, radiology and therapy services along with pharmacies. The firm is planning to add the malls to most of its acute-care hospitals in the near future. △

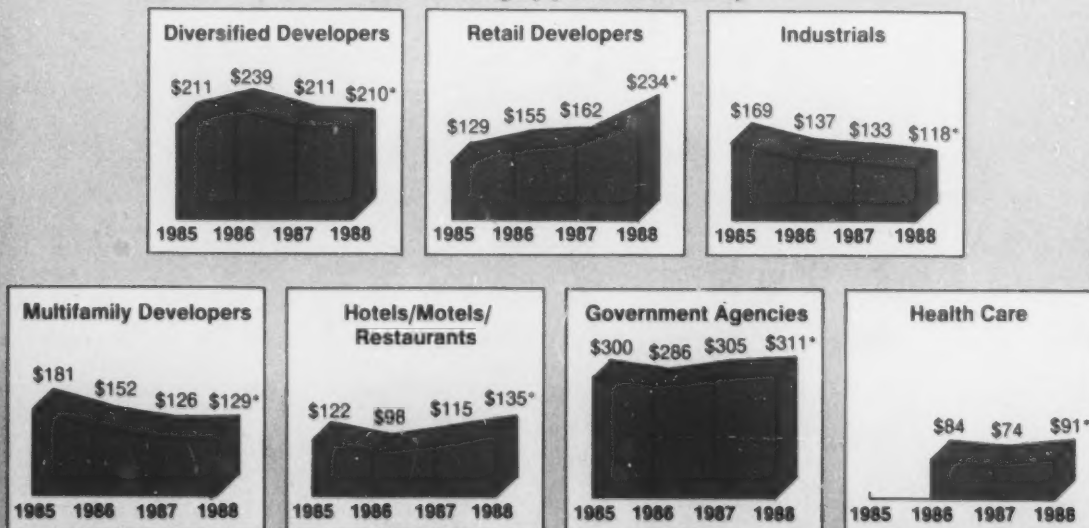
How the Owner/Developer 300 Survey Is Conducted

BD&C's Owner/Developer 300 survey encompasses the firms and agencies that placed the largest volumes of commercial, institutional and industrial (C.I.I.) buildings within the United States during 1987 or the most recent completed fiscal year. These 300 firms are divided into seven categories: 80 Diversified Developers, 30 Retail Developers, 50 Industrials, 30 Multifamily Developers, 40 Hotels/Motels/Restaurants, 50 Government Agencies and 20 Health Care Developers.

The firms and agencies are ranked in the appropriate category on the dollar value of the construction and reconstruction put in place for the given year. Only the base building or "hard" construction costs are included in the dollar value. For projects extending beyond one year, only the value of the construction put in place for the given year is reported. Every effort is made to exclude non-C.I.I. work, such as single-family detached housing, utility and process plants, roads and bridges, and non-building equipment installed by owners or tenants.

To compile information on potential members of the Owner/Developer 300, BD&C conducts an annual survey of several thousand organizations by means of a mailed questionnaire. In cases where BD&C was unable to obtain a response to the questionnaire, the value of a firm's construction was estimated on the basis of public information, such as expenditures printed in annual reports and regional building cost data applied to projects known to be under way. If a ranked firm's construction volume was estimated by BD&C, this fact is noted at the beginning of the entry provided for each firm.

Average Construction Spending by Members in Each Category (Millions of dollars)



*Projection based on weighted average of responses received

BD&C's 10th ANNUAL OWNER/DEVELOPER 300 AT A GLANCE

The following alphabetical index provides an introductory summary of the 1988 Owner/Developer 300. The index includes each firm's name and location; the category in which each firm is ranked; current rank within the category; last year's rank in the same category (if applicable); the dollar volume of construction and reconstruction put in place

during 1987 or the most recent completed fiscal year; and the type of ownership for the space built. A dash (—) indicates that the information was not available.

The first column of the index indicates a subsequent page within the body of the presentation where additional information will be found on each firm.

Owner/Developer 300		Page number	Category	Current rank	Previous rank	CII construction put in place (millions of dollars)	Type of ownership (%)				
Legend:	Category						Build, own & occupy	Build & lease to others	Build & sell	Lease from others in projects built to specs	Supplies specs for franchisees
(IN)	Industrial										
(DD)	Diversified Developer										
(RD)	Retail Developer										
(MD)	Multifamily Developer										
(HMR)	Hotel/Motel/Restaurant										
(GA)	Government Agency										
(HC)	Health Care										
Name, city, state											
A&W Restaurants Inc., Dearborn, Mich.		99	HMR	40	40	10.05	0	0	0	50	50
A.C.E. Cos., Atlanta, Ga.		99	HMR	38	21	17.75	0	0	0	0	100
AIG Realty Inc., New York, N.Y.		71	DD	79	78	23.00	—	—	—	—	—
AIRCOA, Denver, Colo.		99	HMR	35	24	18.50	100	0	0	0	0
AT&T Technologies, Basking Ridge, N.J.		81	IN	2	4	397.00	—	—	—	—	—
Alabama State Building Commission, Montgomery, Ala.		103	GA	16	14	232.83	—	—	—	—	—
Alaska Dept. of Transportation, Juneau, Alaska		106	GA	48	—	20.00	100	0	0	0	0
Albertson's Inc., Boise, Idaho		76	RD	10	8	193.67	5	0	45	50	0
Allied Signal Inc., Morristown, N.J.		83	IN	21	46	110.60	—	—	—	—	—
Allstate Insurance Co., Northbrook, Ill.		69	DD	51	40	70.00	0	100	0	0	0
American Home Products, New York, N.Y.		85	IN	36	22	62.30	—	—	—	—	—
American Medical International Inc., Beverly Hills, Calif.		109	HC	5	7	120.56	97	0	0	2	1
American Stores Properties, Irvine, Calif.		77	RD	20	16	54.48	—	—	—	—	—
Archer Daniels Midland, Decatur, Ill.		84	IN	32	—	74.50	—	—	—	—	—
Argonaut AEC, GM Corp., Detroit, Mich.		8	IN	1	1	586.50	100	0	0	0	0
Arizona Pac. Ping. and Const. Off., Phoenix, Ariz.		106	GA	49	42	20.00	100	0	0	0	0
Arkansas State Building Services, Little Rock, Ark.		100	GA	44	44	35.00	100	0	0	0	0
Baltimore Dept. of Public Works, Baltimore, Md.		101	GA	38	48	70.00	—	—	—	—	—
Bank of America Corp., San Francisco, Calif.		69	DD	57	58	52.50	47	0	0	53	0
Baxter Travenol Laboratories, Deerfield, Ill.		85	IN	41	16	45.10	—	—	—	—	—

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Owner/Developer 300

Legend: Category

(IN)	Industrial	(HMR)	Hotel/Motel/ Restaurant
(DD)	Diversified Developer	(GA)	Government Agency
(RD)	Retail Developer	(HC)	Health Care
(MD)	Multifamily Developer		

Type of ownership (%)

Name, city, state	Page number	Category	Current rank	Previous rank	C/I construction put in place (millions of dollars)	Build, own & occupy	Build & lease to others	Build & sell	Lease from others in projects built to specs	Supplies specs for franchisees
Bay Colony Property Inc., Boston, Mass.	71	DD	74	—	28.60	0	95	5	0	0
The Beacon Cos., Boston, Mass.	65	DD	15	7	279.00	0	100	0	0	0
Bellemead Development Corp., Roseland, N.J.	67	DD	38	30	91.40	0	98	2	0	0
BetaWest Properties Inc., Denver, Colo.	65	DD	30	61	135.00	0	100	0	0	0
Birtcher, Laguna Niguel, Calif.	67	DD	33	41	118.58	0	100	0	0	0
Boeing Co., Seattle, Wash.	82	IN	15	8	182.00	—	—	—	—	—
Boston Properties, Boston, Mass.	67	DD	34	31	115.00	0	100	0	0	0
Bramalea USA, Urban Properties Inc., Dallas, Texas	69	DD	53	71	62.00	0	100	0	0	0
Bristol-Myers Co., Syracuse, N.Y.	81	IN	5	—	275.00	100	0	0	0	0
Burger King Corp., Miami, Fla.	96	HMR	7	6	160.00	10	0	0	0	90
Cabot, Cabot & Forbes, Boston, Mass.	65	DD	24	39	175.00	0	90	10	0	0
Caesars World Inc., Los Angeles, Calif.	98	HMR	32	20	20.00	100	0	0	0	0
Call Associates, Cranford, N.J.	67	DD	37	46	95.00	0	90	10	0	0
California Dept. of Corrections, Sacramento, Calif.	102	GA	12	10	316.09	100	0	0	0	0
California Dept. of General Services, Sacramento, Calif.	106	GA	43	—	49.50	—	—	—	—	—
Campeau Development Corp., Cincinnati, Ohio	76	RD	12	—	179.00	—	—	—	—	—
Cardinal Industries Inc., Columbus, Ohio	89	MD	2	2	613.14	0	90	10	0	0
Cardinal Industries Inc., Columbus, Ohio	96	HMR	6	11	199.93	0	90	10	0	0
Carley Capital Group, Madison, Wis.	68	DD	48	38	73.50	0	90	10	0	0
Carter Hawley Hale Stores, Los Angeles, Calif.	78	RD	24	24	29.00	100	0	0	0	0
Caterpillar Inc., Peoria, Ill.	84	IN	31	—	75.60	—	—	—	—	—
Centennial Development Corp., Vienna, Va.	69	DD	52	60	66.14	0	100	0	0	0
Centex Real Estate Corp., Centex Homes, Dallas, Texas	91	MD	15	—	44.20	0	0	100	0	0
Centre Development Co., Dallas, Texas	66	DD	47	52	73.80	0	70	30	0	0
Centrum Properties, Chicago, Ill.	68	DD	45	—	76.00	0	100	0	0	0
Century Development Corp., Houston, Texas	66	DD	29	20	140.00	0	100	0	0	0
Cenvill Development Corp., Lake Worth, Fla.	90	MD	9	14	134.85	0	0	100	0	0
Charter Medical Corp., Macon, Ga.	109	HC	6	5	100.00	97	3	0	0	0
Chilf's Inc., Dallas, Texas	98	HMR	29	36	27.00	10	0	0	80	10
Chiofaro Co., Boston, Mass.	66	DD	22	28	180.00	0	100	0	0	0
Chrysler Development Assocs., Rosalyn, Va.	71	DD	69	—	34.30	0	50	50	0	0
Colgate-Palmolive Co., Edison, N.J.	85	IN	42	—	42.80	80	0	0	20	0
Colorado Dept. of Corrections, Colorado Springs, Colo.	106	GA	47	49	21.50	100	0	0	0	0
Comprehensive Care Corp., Irvine, Calif.	111	HC	20	12	17.00	100	0	0	0	0
ConAgra Inc., Omaha, Neb.	86	IN	46	—	38.30	—	—	—	—	—
Connecticut Dept. of Public Works, Hartford, Conn.	103	GA	19	20	190.93	100	0	0	0	0
Continental Development Corp., El Segundo, Calif.	71	DD	76	73	25.00	0	100	0	0	0
Coscan Development Corp., Toronto, Canada	91	MD	19	—	31.00	0	0	100	0	0
Trammell Crow Co., Dallas, Texas	62	DD	2	1	1,499.70	0	100	0	0	0
Trammell Crow Residential Operating Co., Dallas, Texas	89	MD	1	1	789.45	0	85	15	0	0

Owner/Developer 300

Legend: Category

(IN)	Industrial	(HMR)	Hotel/Motel/ Restaurant
(DD)	Diversified Developer	(GA)	Government Agency
(RD)	Retail Developer	(HC)	Health Care
(MD)	Multifamily Developer		

Name, city, state	Page number	Category	Current rank	Previous rank	CII construction put in place (millions of dollars)	Type of ownership (%)				
						Build, own & occupy	Build & lease to others	Build & sell	Lease from others in projects built to specs	Supplies specs for franchisees
Crowell Industries, Upland, Calif.	92	MD	24	30	16.80	0	0	0	100	0
Crown American Corp., Johnstown, Pa.	65	DD	14	34	286.00	19	81	0	0	0
D & S Co., North Hollywood, Calif.	92	MD	30	—	7.50	—	—	—	—	—
Days Inn of America Inc., Atlanta, Ga.	99	HMR	36	22	18.00	0	0	100	0	0
Days of the West Inc., Rancho Cordova, Calif.	99	HMR	37	34	18.00	100	0	0	0	0
Dayton Hudson Corp., Minneapolis, Minn.	75	RD	1	—	702.60	—	—	—	—	—
Edward J. DeBartolo Co., Youngstown, Ohio	77	RD	15	21	96.00	1	99	0	0	0
DeMatteis Organization, Uniondale, N.Y.	66	DD	25	26	162.00	33	34	33	0	0
Digital Equipment Corp., Concord, Mass.	63	IN	22	—	106.50	—	—	—	—	—
District of Columbia Dept. of Public Works, Washington, D.C.	105	GA	42	29	53.00	—	—	—	—	—
Kevin F. Donohoe Co. Inc., Philadelphia, Pa.	68	DD	49	51	73.00	0	100	0	0	0
Doubletree/Compri Hotels, Phoenix, Ariz.	96	HMR	14	13	85.00	60	0	0	0	40
Dow Chemical Co., Midland, Mich.	84	IN	28	9	83.20	—	—	—	—	—
Dresser Industries, Dallas, Texas	86	IN	48	—	37.00	—	—	—	—	—
Duke Associates, Indianapolis, Ind.	66	DD	27	29	150.00	—	—	—	—	—
E.I. duPont de Nemours & Co., Wilmington, Del.	61	IN	3	—	319.90	—	—	—	—	—
Eastman Kodak Co., Rochester, N.Y.	83	IN	18	17	146.00	—	—	—	—	—
Leo Eisenberg Co., Kansas City, Mo.	76	RD	11	13	190.00	0	80	20	0	0
Empire West Cos., Tucson, Ariz.	92	MD	20	20	31.00	0	100	0	0	0
Equitable Real Estate Investment Mgmt. Inc., Atlanta, Ga.	64	DD	10	17	394.00	1	95	4	0	0
Bob Evans Farms Inc., Columbus, Ohio	99	HMR	39	39	13.00	100	0	0	0	0
FPI Real Estate Group, Sacramento, Calif.	92	MD	29	27	10.00	90	0	10	0	0
Federal Bureau of Prisons, Washington, D.C.	105	GA	34	43	98.00	100	0	0	0	0
Fifield Development Corp., Chicago, Ill.	68	DD	40	—	88.00	0	100	0	0	0
Financial Investment Corp., Washington, D.C.	69	DD	58	75	50.00	0	100	0	0	0
Florida Dept. of General Services, Tallahassee, Fla.	102	GA	13	15	250.00	65	0	0	35	0
Flournoy Construction Co., Columbus, Ga.	91	MD	17	22	37.24	0	100	0	0	0
Ford Motor Co., Dearborn, Mich.	82	IN	9	5	210.00	95	5	0	0	0
Forest City Residential Development, Cleveland, Ohio	91	MD	14	10	52.06	75	0	25	0	0
Foster International Development Inc., Pittsburgh, Pa.	68	DD	50	77	70.50	0	90	10	0	0
GHM Inc., East Hartford, Conn.	110	HC	11	9	40.00	0	0	0	0	100
John W. Galbreath & Co., Columbus, Ohio	65	DD	16	23	256.90	95	5	0	0	0
General Development Corp., Miami, Fla.	92	MD	23	11	24.50	0	0	100	0	0
General Dynamics Corp., St. Louis, Mo.	86	IN	49	25	37.00	—	—	—	—	—
General Electric Co., Schenectady, N.Y.	82	IN	11	12	204.00	—	—	—	—	—
General Growth Cos., Des Moines, Iowa	76	RD	14	18	115.00	90	10	0	0	0
General Mills Restaurants Inc., Orlando, Fla.	97	HMR	18	18	50.00	—	—	—	—	—
Georgia-Pacific Corp., Atlanta, Ga.	82	IN	16	32	166.00	—	—	—	—	—
Gene B. Glick Co. Inc., Indianapolis, Ind.	92	MD	28	29	12.00	0	100	0	0	0
Golden Corral Development Corp., Raleigh, N.C.	99	HMR	33	—	20.00	10	0	0	90	0

Owner/Developer 300

Legend: Category

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(DD)	Diversified Developer	(GA)	Government Agency
(RD)	Retail Developer	(HC)	Health Care
(MD)	Multifamily Developer		

Name, city, state

	Page number	Category	Current rank	Previous rank	CII construction put in place (millions of dollars)	Build, own & occupy	Build & lease to others	Build & sell	Lease from others in projects built to specs	Supplies specs for franchisees
Golden Nugget Inc., Las Vegas, Nev.	98	HMR	31	10	24.44	100	0	0	0	0
Goodyear Tire & Rubber Co., Akron, Ohio	84	IN	25	3	93.70	—	—	—	—	—
The Gotham Organization, New York, N.Y.	68	DD	42	22	81.00	—	—	—	—	—
W.R. Grace & Co., New York, N.Y.	85	IN	38	—	60.10	—	—	—	—	—
Great Atlantic & Pacific Tea Co., Montvale, N.J.	78	RD	26	11	24.00	50	0	0	50	0
Hardee's Food Systems, Rocky Mount, N.C.	96	HMR	10	25	130.00	35	0	0	0	65
Harris Methodist Health System, Fort Worth, Texas	110	HC	9	8	46.25	100	0	0	0	0
Hartz Mountain Industries, Secaucus, N.J.	65	DD	20	21	200.00	0	100	0	0	0
Hawaii Dept. of Accounting & General Services, Honolulu, Hawaii	104	GA	28	24	134.88	100	0	0	0	0
Heller Construction Co., Edison, N.J.	70	DD	62	—	44.20	0	100	0	0	0
Hemmeter Development Corp., Honolulu, Hawaii	95	HMR	4	—	367.00	100	0	0	0	0
Herring Marathon Group, Dallas, Texas	78	RD	25	28	25.00	0	100	0	0	0
Hewlett-Packard Co., Palo Alto, Calif.	81	IN	6	15	250.00	100	0	0	0	0
Hilton Hotels Corp., Beverly Hills, Calif.	96	HMR	11	8	123.96	100	0	0	0	0
Holiday Corp., Memphis, Tenn.	95	HMR	2	2	546.86	100	0	0	0	0
Homart Development Co., Chicago, Ill.	64	DD	7	54	770.00	0	100	0	0	0
Hospital Corp. of America, Nashville, Tenn.	109	HC	2	2	200.00	85	15	0	0	0
Host International, Santa Monica, Calif.	97	HMR	21	33	41.40	2	0	0	98	0
Hovnanian Enterprises Inc., Red Bank, N.J.	90	MD	7	4	178.52	0	0	100	0	0
Humana Inc., Louisville, Ky.	109	HC	3	4	172.00	90	10	0	0	0
Hyatt Development Corp., Chicago, Ill.	97	HMR	16	12	76.00	100	0	0	0	0
ITT Corp., New York, N.Y.	85	IN	40	26	47.20	—	—	—	—	—
Illinois Capital Development Board, Springfield, Ill.	103	GA	22	19	166.08	100	0	0	0	0
Intergroup Development, Houston, Texas	98	HMR	25	27	35.00	82	15	3	0	0
International Paper Co., Mobile, Ala.	81	IN	4	10	313.30	—	—	—	—	—
Interstate Hotels Corp., Pittsburgh, Pa.	96	HMR	15	14	81.77	100	0	0	0	0
JBG Cos., Washington, D.C.	70	DD	61	62	47.00	0	80	20	0	0
James-Lewis Corp. Group, Berwyn, Pa.	69	DD	59	67	49.72	0	50	50	0	0
Jerrico Inc., Lexington, Ky.	99	HMR	34	37	20.00	100	0	0	0	0
Johns Hopkins Hospital, Baltimore, Md.	111	HC	17	18	25.00	100	0	0	0	0
Johnson & Johnson, New Brunswick, N.J.	83	IN	20	41	112.50	—	—	—	—	—
K mart Corp., Troy, Mich.	76	RD	8	9	250.00	10	5	0	85	0
Kaiser Foundation Hospital & Health Plans, Oakland, Calif.	109	HC	1	1	250.00	100	0	0	0	0
Kansas Div. of Architectural Services, Topeka, Kan.	105	GA	41	—	60.00	—	—	—	—	—
Alan I. Kay Cos., Bethesda, Md.	66	DD	23	19	175.00	—	—	—	—	—
Kilroy Industries, El Segundo, Calif.	71	DD	77	76	24.00	—	—	—	—	—
Koll Co., Newport Beach, Calif.	64	DD	9	15	450.00	0	100	0	0	0
Kraft Inc., Glenview, Ill.	84	IN	26	27	87.20	—	—	—	—	—
Kroger Co., Cincinnati, Ohio	75	RD	4	1	352.00	—	—	—	—	—
La Quinta Motor Inns Inc., San Antonio, Texas	97	HMR	23	19	37.80	100	0	0	0	0

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Owner/Developer 300

Legend: Category

(IN)	Industrial	(HMR)	Hotel/Motel/ Restaurant
(DD)	Diversified Developer	(GA)	Government Agency
(RD)	Retail Developer	(HC)	Health Care
(MD)	Multifamily Developer		

Name, city, state	Page number	Category	Current rank	Previous rank	CII construction put in place (millions of dollars)	Type of ownership (%)				
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Landmarks Group, Atlanta, Ga.	71	DD	78	—	24.00	0	100	0	0	0
LaSalle Partners Ltd., Chicago, Ill.	70	DD	63	50	40.00	—	—	—	—	—
Lieberman Corp., St. Louis, Mo.	90	MD	10	13	129.39	0	57	43	0	0
Life Care Services Corp., Des Moines, Iowa	110	HC	8	14	60.00	0	95	5	0	0
EB Lilly & Co., Indianapolis, Ind.	86	IN	45	—	40.00	100	0	0	0	0
Lincley Corp., St. Louis, Mo.	71	DD	73	65	28.69	0	60	40	0	0
Lincoln Property Co., Dallas, Texas	63	DD	3	2	1,264.61	0	100	0	0	0
Lockheed Corp., Calabasas, Calif.	83		23	—	104.00	—	—	—	—	—
Los Angeles Dept. of Airports, Los Angeles, Calif.	104	GA	32	35	102.90	20	70	0	0	10
Los Angeles Dept. of Public Works, Los Angeles, Calif.	103	GA	24	28	162.00	95	5	0	0	0
Louisiana Dept. of Fac. Planning & Control, Baton Rouge, La.	102	GA	14	32	250.00	—	—	—	—	—
MEPC American Properties Inc., Dallas, Inc.	71	DD	70	—	30.00	0	100	0	0	0
McCormick Properties, Hunt Valley, Md.	71	DD	72	33	29.00	0	90	10	0	0
McDonald's Corp., Oak Brook, Ill.	95	HMR	3	3	398.24	0	100	0	0	0
McDonnell Douglas Corp., St. Louis, Mo.	82	IN	13	11	194.00	—	—	—	—	—
McKellar Dev. of La Jolla, La Jolla, Calif.	66	DD	26	55	154.19	0	47	53	0	0
Maguire Thomas Partners, Santa Monica, Calif.	63	DD	1	3	1,545.00	0	100	0	0	0
Manufacturers Life Insurance Co., Toronto, Ontario	67	DD	36	63	100.00	0	100	0	0	0
Mariner Hotel Corp., Dallas, Texas	98	HMR	27	—	30.00	100	0	0	0	0
Marriott Corp., Washington, D.C.	95	HMR	1	1	897.38	—	—	—	—	—
Maryland Dept. of General Services, Baltimore, Md.	104	GA	30	27	128.65	97	0	0	3	0
Massachusetts Div. of Capital Planning, Boston, Mass.	104	GA	25	17	151.50	100	0	0	0	0
Massachusetts General Hospital, Boston, Mass.	111	HC	18	15	20.00	100	0	0	0	0
May Department Stores Co., St. Louis, Mo.	76	RD	9	—	228.00	—	—	—	—	—
Memorial Corp., Houston, Texas	71	DD	75	—	27.00	0	0	100	0	0
Merck & Co. Inc., Rahway, N.J.	84	IN	30	—	80.00	100	0	0	0	0
Metropolitan Structures Inc., Chicago, Ill.	70	DD	67	—	36.73	0	100	0	0	0
Michigan Office of Facilities, Lansing, Mich.	103	GA	18	26	200.00	100	0	0	0	0
Minnesota Div. of State Bldg. Const., St. Paul, Minn.	105	GA	39	41	70.00	100	0	0	0	0
Minnesota Mining & Manufacturing Co., St. Paul, Minn.	84	IN	34	43	70.00	—	—	—	—	—
Missouri Div. of Design and Construction, Jefferson City, Mo.	105	GA	37	45	81.17	100	0	0	0	0
Monsanto Co., St. Louis, Mo.	82	IN	14	35	191.90	—	—	—	—	—
Philip Morris Companies, New York, N.Y.	81	IN	7	—	236.80	—	—	—	—	—
Morton Buildings, Watseka, Ill.	67	DD	31	45	130.00	0	0	100	0	0
Motel 6 L.P., Santa Barbara, Calif.	98	HMR	28	28	30.00	100	0	0	0	0
Motorola Inc., Schaumburg, Ill.	83	IN	24	29	94.50	—	—	—	—	—
Mulligan/Griffin, Rockville, Md.	69	DD	56	64	53.00	0	100	0	0	0
NASA, Washington, D.C.	104	GA	29	21	133.00	100	0	0	0	0
NCHP, Washington, D.C.	92	MD	22	8	25.00	0	0	100	0	0
NVRyan L.P., McLean, Va.	88	MD	4	—	272.80	—	—	—	—	—

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Owner/Developer 300

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National HealthCorp. L.P., Murfreesboro, Tenn.	111	HC	16	—	26.89	100	0	0	0	0
National Medical Enterprises Inc., Los Angeles, Calif.	109	HC	7	—	85.64	93	2	5	0	0
Nebraska State Building Div., Lincoln, Neb.	106	GA	46	—	23.69	—	—	—	—	—
New Jersey Div. of Building Construction, Trenton, N.J.	105	GA	36	—	84.55	100	0	0	0	0
New Jersey Housing & Mortgage Finance Agency, Trenton, N.J.	92	MD	21	—	30.00	—	—	—	—	—
New York City Dept. of General Services, New York, N.Y.	102	GA	9	39	360.00	100	0	0	0	0
New York City Health and Hospitals Corp., New York, N.Y.	111	HC	15	10	28.00	95	0	0	5	0
New York State Dormitory Authority, Delmar, N.Y.	102	GA	8	8	439.00	1	99	0	0	0
New York State Fac. Dev. Corp., Albany, N.Y.	109	HC	4	6	135.00	0	100	0	0	0
New York State Office of General Services, Albany, N.Y.	103	GA	15	11	237.50	0	0	100	0	0
North Carolina State Construction Office, Raleigh, N.C.	103	GA	20	9	182.95	83	0	0	0	17
North Cranbrook Associates, Southfield, Mich.	92	MD	27	—	13.00	0	100	0	0	0
Northrop Corp., Los Angeles, Calif.	85	IN	35	49	68.30	—	—	—	—	—
Ohio Division of Public Works, Columbus, Ohio	101	GA	5	6	963.79	—	—	—	—	—
Orion Homes Corp., Pompano Beach, Fla.	90	MD	12	18	84.85	0	0	100	0	0
PPG Industries, Pittsburgh, Pa.	86	IN	44	24	40.70	100	0	0	0	0
Pacific Coast Development Co., San Clemente, Calif.	89	MD	3	9	385.00	—	—	—	—	—
Pacific Scene Inc., San Diego, Calif.	92	MD	25	—	14.28	0	15	85	0	0
Paragon Group Inc., Dallas, Texas	66	DD	28	49	144.00	0	100	0	0	0
Jack Parker Corp., Forest Hills, N.Y.	68	DD	44	59	76.50	—	—	—	—	—
J.C. Penney Co., Dallas, Texas	75	RD	7	4	262.00	—	—	—	—	—
Pennsylvania Dept. of General Services, Harrisburg, Pa.	104	GA	31	30	110.40	0	100	0	0	0
PepsiCo Inc., Purchase, N.Y.	82	IN	12	13	197.00	100	0	0	0	0
PepsiCo, Purchase, N.Y.	96	HMR	12	5	100.00	—	—	—	—	—
City of Phoenix, Phoenix, Ariz.	106	GA	45	—	27.77	100	0	0	0	0
Picerno Properties, Warwick, R.I.	90	MD	11	15	90.15	0	98	2	0	0
Pickett Cos., Dublin, Ohio	97	HMR	19	29	50.00	0	34	66	0	0
Pillsbury Co., Minneapolis, Minn.	83	IN	19	19	114.00	—	—	—	—	—
Prest Hotel Corp., Dallas, Texas	96	HMR	8	—	150.00	100	0	0	0	0
Prentiss/Copley Investment Group, Dallas, Texas	84	DD	11	16	350.00	0	100	0	0	0
Price Development Co., Salt Lake City, Utah	78	RD	22	26	40.50	0	100	0	0	0
Procter & Gamble Co., Cincinnati, Ohio	86	IN	47	30	37.10	—	—	—	—	—
Prudential Property Co., Newark, N.J.	63	DD	4	5	1,139.43	0	100	0	0	0
Lat Purser & Associates Inc., Charlotte, N.C.	77	RD	19	23	55.00	0	100	0	0	0
RJR Nabisco Inc., Winston-Salem, N.C.	82	IN	8	2	234.50	—	—	—	—	—
Ramada Inc., Phoenix, Ariz.	95	HMR	5	4	355.00	30	0	0	0	70
Raytheon Co., Lexington, Mass.	84	IN	27	44	87.00	—	—	—	—	—
RecreActions Group, Newport Beach, Calif.	91	MD	18	—	34.44	0	0	100	0	0
Red Roof Inns Inc., Hilliard, Ohio	97	HMR	24	16	35.50	100	0	0	0	0
Republic Health Corp., Dallas, Texas	110	HC	13	11	30.00	100	0	0	0	0

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Owner/Developer 300

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Type of ownership (%)

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Revco Drug Co., Twinsburg, Ohio	77	RD	18	20	61.00	10	0	0	90	0
The Riese Organization, New York, N.Y.	97	HMR	17	35	60.00	90	10	0	0	0
Ritz Carlton Hotel Co., Atlanta, Ga.	97	HMR	22	17	40.00	50	0	0	0	50
Robertson Homes, Stockton, Calif.	89	MD	5	3	246.00	0	25	75	0	0
Rockwell International Corp., El Segundo, Calif.	82	IN	10	6	210.00	75	0	0	25	0
Edward Rose Building Enterprise, Southfield, Mich.	91	MD	16	23	42.68	0	97	3	0	0
Rosen Associates, Jericho, N.Y.	69	DD	55	44	55.00	0	95	5	0	0
Rouse & Associates, Malvern, Pa.	63	DD	5	9	900.00	0	80	20	0	0
Rouse Co., Columbia, Md.	75	RD	3	7	368.00	0	100	0	0	0
S & A Restaurants Corp., Dallas, Texas	98	HMR	30	30	25.00	40	0	0	60	0
St. Paul Port Authority, St. Paul, Minn.	104	GA	26	34	145.66	0	100	0	0	0
Lee Sammis Assoc. Inc., McLean, Va.	70	DD	64	66	40.00	0	100	0	0	0
Santa Fe Pacific Realt. Corp., San Francisco, Calif.	70	DD	65	—	38.70	0	70	20	10	0
Schostak Brothers & Co., Southfield, Mich.	65	DD	13	—	325.00	0	100	0	0	0
Sears, Roebuck and Co., Chicago, Ill.	75	RD	5	2	317.20	—	—	—	—	—
Segal Associates Inc., Bellmawr, N.J.	92	MD	26	26	13.80	2	0	98	0	0
Martin Selig Real Estate, Seattle, Wash.	67	DD	39	56	90.00	0	100	0	0	0
Sheraton Corp., Boston, Mass.	96	HMR	9	7	140.00	25	0	0	75	0
Shriners Hospitals, Tampa, Fla.	111	HC	14	17	28.20	100	0	0	0	0
Melvin Simon & Associates, Indianapolis, Ind.	75	RD	6	12	307.59	0	100	0	0	0
Sisters of the Third Order of St. Francis, Peoria, Ill.	111	HC	19	13	18.00	100	0	0	0	0
Skinner & Broadbent Co., Indianapolis, Ind.	78	RD	30	—	15.00	0	95	5	0	0
Charles E. Smith Cos., Arlington, Va.	67	DD	32	37	124.00	—	—	—	—	—
South Carolina Div. of General Services, Columbia, S.C.	103	GA	21	16	176.50	85	0	0	10	5
A.G. Spanos Construction Inc., Stockton, Calif.	90	MD	8	5	148.65	20	0	80	0	0
Spatz & Co., Northbrook, Ill.	78	RD	27	30	22.00	0	100	0	0	0
Spaulding & Slye, Burlington, Mass.	64	DD	8	57	686.80	5	85	10	0	0
Stein and Co., Chicago, Ill.	69	DD	54	—	60.00	0	75	25	0	0
Sudler Cos., Roseland, N.J.	70	DD	66	—	38.00	0	82	18	0	0
Super 8 Motels Inc., Aberdeen, S.D.	97	HMR	20	—	41.60	30	70	0	0	0
Sutter Hospital, Sacramento, Calif.	110	HC	12	3	32.00	100	0	0	0	0
TCC Center Cos. Inc., Minneapolis, Minn.	78	RD	28	—	20.00	0	100	0	0	0
TOLD Corp., Newbury Park, Calif.	70	DD	68	80	35.00	0	70	30	0	0
TRF Pacific Inc., Bellevue, Wash.	77	RD	17	15	88.00	0	50	50	0	0
TRW Inc., Cleveland, Ohio	84	IN	29	20	80.60	100	0	0	0	0
Taubman Co. Inc., Bloomfield Hills, Mich.	64	DD	12	18	333.00	0	100	0	0	0
Texas Dept. of Corrections, Huntsville, Texas	103	GA	23	22	165.00	90	0	0	10	0
Texas Fac. Const. and Space Mgmt. Div., Austin, Texas	106	GA	50	—	20.00	—	—	—	—	—
Tishman West Cos., Los Angeles, Calif.	65	DD	19	25	203.00	0	100	0	0	0
Tooley & Co., Los Angeles, Calif.	68	DD	41	53	85.00	0	100	0	0	0

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Transpacific Development Co., Torrance, Calif.	68	DD	46	10	75.00	0	100	0	0	0
Trizec Corp. Ltd., Calgary, Alberta	66	DD	21	32	191.00	—	—	—	—	—
Tucker Companies Inc., Northbrook, Ill.	78	RD	29	—	20.00	0	100	0	0	0
URBCO Inc., Hartford, Conn.	67	DD	35	—	115.00	0	100	0	0	0
USG Corp., Chicago, Ill.	86	IN	43	—	42.40	—	—	—	—	—
Union Carbide Corp., Danbury, Conn.	86	IN	50	—	31.90	—	—	—	—	—
U.S. Air Force, Washington, D.C.	101	GA	4	4	1,440.00	100	0	0	0	0
U.S. Army Corps of Engineers, Washington, D.C.	101	GA	2	3	1,808.00	100	0	0	0	0
U.S. Dept. of Energy, Washington, D.C.	101	GA	1	2	1,818.91	100	0	0	0	0
U.S. Dept. of Transportation, Washington, D.C.	104	GA	27	23	142.50	0	0	0	0	100
U.S. General Services Administration, Washington, D.C.	102	GA	11	12	321.00	100	0	0	0	0
U.S. Home Corp., Houston, Texas	90	MD	6	7	203.24	—	—	—	—	—
U.S. Marine Corps, Washington, D.C.	102	GA	10	13	327.67	98	0	0	2	0
U.S. Naval Facilities Engineering Command, Alexandria, Va.	101	GA	3	1	1,566.00	—	—	—	—	—
U.S. Postal Service, Washington, D.C.	101	GA	6	5	894.00	80	0	0	20	0
U.S. Public Health Service, Rockville, Md.	103	GA	17	18	231.00	100	0	0	0	0
U.S. Veterans Administration, Washington, D.C.	101	GA	7	7	515.51	100	0	0	0	0
United Technologies Corp., Hartford, Conn.	83	IN	17	21	156.20	—	—	—	—	—
Universal Medical Bldgs., Milwaukee, Wis.	110	HC	10	16	42.94	0	95	5	0	0
Urban Investment & Development Co., Chicago, Ill.	68	DD	43	13	80.00	—	—	—	—	—
UseCafes L.P., Dallas, Texas	98	HMR	26	23	34.00	0	0	0	0	100
Utah Div. of Facilities Const. & Mgmt., Salt Lake City, Utah	105	GA	40	40	70.00	80	0	0	20	0
Wal-Mart Stores Inc., Bentonville, Ark.	75	RD	2	—	527.90	—	—	—	—	—
Walgreen Co., Deerfield, Ill.	76	RD	13	14	144.90	10	0	0	90	0
Montgomery Ward, Chicago, Ill.	77	RD	21	19	50.00	50	0	0	50	0
Washington State Bureau of Public Works, Olympia, Wash.	105	GA	33	33	100.00	100	0	0	0	0
Webb Cos., Lexington, Ky.	63	DD	6	4	870.00	3	92	5	0	0
Leon N. Weiner and Assoc., Wilmington, Del.	71	DD	80	—	22.50	0	0	100	0	0
Weingarten-Siegel Group, Manalapan, N.J.	91	MD	13	21	72.15	95	5	0	0	0
Weitz Co., Des Moines, Iowa	85	DD	17	24	254.71	30	0	70	0	0
Welsh Companies Inc., Eden Prairie, Minn.	71	DD	71	—	29.44	0	68	32	0	0
West*Group, McLean, Va.	70	DD	60	72	49.25	0	100	0	0	0
Westin Hotels & Resorts, Seattle, Wash.	96	HMR	13	9	90.00	30	0	0	70	0
Westinghouse Electric Corp., Pittsburgh, Pa.	85	IN	39	45	58.50	85	0	0	15	0
Weyerhaeuser Co., Tacoma, Wash.	85	IN	37	—	60.50	—	—	—	—	—
Winn-Dixie Stores Inc., Jacksonville, Fla.	77	RD	16	17	95.00	—	—	—	—	—
Wisconsin Div. of State Facilities Mgmt., Madison, Wis.	105	GA	35	38	90.00	95	0	0	5	0
F.W. Woolworth Co., New York, N.Y.	78	RD	23	29	34.96	0	0	0	100	0
Xerox Corp., Stamford, Conn.	84	IN	33	—	70.70	—	—	—	—	—
Zeckendorf Co., New York, N.Y.	65	DD	18	—	243.35	0	25	75	0	0

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DIVERSIFIED DEVELOPERS

CONSTRUCTION VOLUME DIPS TO \$16.9 BILLION

But 80 of the leading firms project a decrease of less than 1% in the coming year

1

(3)

\$1,545.00

Maguire Thomas Partners
1299 Ocean Ave.,
Suite 1000
Santa Monica, CA 90401
James A. Thomas,
Robert F. Maguire,
Co-Managing Ptnrs.

Offices accounted for 50 percent of construction, followed by mixed-use projects (40 percent). Firm develops institutional mixed-use projects and corporate headquarters buildings. No design and less than 50 percent of construction done in house. Building methods include fast-track scheduling, competitive bidding and negotiated contracts for construction. One hundred percent of developed space is leased out.

4

(5)

\$1,139.43

The Prudential Property Co.
Prudential Plaza
Newark, NJ 07101
Brian J. Strum, Chmn.
Robert O. Fulford,
Exec. VP
Ronald L. Rayevich,
Exec. VP

Parent firm is Prudential Insurance Co. of America. Above figure includes \$268 million in reconstruction. Specializing in mixed-use, industrial, retail and hotel projects, firm does no design or construction in house. Volume includes 65 percent offices, followed by 20 percent hotel/motel, with all developed space leased to others.

2

(1)

\$1,499.70

Trammell Crow Co.
3500 LTV Center
2001 Ross Ave.
Dallas, TX 75201-2997
J. McDonald Williams,
Managing Ptnr.

Above figure includes \$1 million in reconstruction. Specializing in office, warehouse, retail and luxury hotels, this privately owned firm does less than 50 percent of design in house and no construction in house. Activity includes 44 percent office, 29 percent warehouse, 25 percent retail and 2 percent hotel/motel. Recent projects include Commerce Business Park, Los Angeles, Calif., Lincoln Tower, Portland, Ore., and Carlson R&D Center, Minneapolis, Minn.

5

(9)

\$900.00

Rouse & Associates
Great Valley Corp. Center
65 Valley Stream Parkway
Malvern, PA 19355
Joseph Denny, Gen. Ptnr.
Tom Dicht, Mgr.,
Hospitality Group

This privately owned firm does no design or construction in house. Eighty percent of what is constructed is leased to others and 20 percent is sold. Specializing in downtown and suburban office and industrial buildings, firm is currently working on the second phase of Liberty Place in Philadelphia, a 1.2 million-sq.-ft. office tower.

3

(2)

\$1,264.61

Lincoln Property Co.
3300 Lincoln Plaza
500 North Akard
Dallas, TX 75201
A. Mack Pogue, Chmn.,
Sr. Ptnr.
C. Preston Butcher,
Regional Ptnr.
William C. Duval,
Regional Ptnr.

Firm has four separate construction subsidiaries in Dallas. Less than 50 percent of design and construction done in house. Best-known for high-rise and suburban office and industrial buildings, Lincoln Properties leases all that it builds to others. Methods of construction include fast-track scheduling, competitive bidding and negotiated contracts for design and construction.

6

(4)

\$870.00

The Webb Cos.
3000 Lexington
Financial Center
Lexington, KY 40507
R. Dudley Webb,
National Ptnr.

Construction volume estimated by BD&C. Firm is best-known for central business district, mixed-use projects in most major U.S. markets with recent growth in retail and hotel. Activity includes 64 percent offices, 10 percent retail and 8 percent warehouse/distribution centers. A new project is Jamestown Resort and Marina, a 585-slip marina with a 40-suite lodge in Jamestown, Ky.

Maguire Thomas' Wells Fargo Center is a two-tower mixed-use building in downtown L.A. designed by Skidmore, Owings & Merrill.

A 50% interest of Tishman West was purchased by Balcor Co.; Beacon is using the up-down construction method at 75 State St.

Many of the Diversified Developers are concentrating their efforts on opening new branch offices around the country and abroad to help oversee their new market expansions.

7
(54)
\$770.00

Homart Development Co.
55 W. Monroe St.
Chicago, IL 60603-5060
Michael J. Gregoire,
Pres., CEO
Adalbert D. Drogosz,
Sr. VP, Design & Const.
Frank J. Comber,
First VP, Const.

Parent firm is Sears, Roebuck and Co. Sixty million of above figure includes reconstruction. Less than 50 percent of design and construction done in house, with half of firm's projects consisting of office and half retail. One hundred percent of buildings are leased to others. A recently completed retail project is phase one of the Parks at Arlington in Arlington, Texas.

8
(57)
\$685.80

Spaulding & Slye
25 Burlington Mall Road
Burlington, MA 01803
William N. Whelan,
Sr. VP, Devel. & Const.
John S. Konopka,
VP Const. Oper.

This privately owned firm is currently a development partner for 125 High Street, a \$450 million office complex in downtown Boston. All construction and no design done in house. Ninety-five percent of activity includes offices. Eighty-five percent of projects are leased, 10 percent sold and 5 percent occupied by firm.

9
(15)
\$450.00

Koll Co.
4343 Von Karman Ave.
Newport Beach, CA 92660
Donald M. Koll, CEO
Ed Griffin,
Financial Svcs. Group

Known for its commercial and industrial work in the western U.S., firm does no design in house, but has a construction subsidiary, Koll Construction Co. In the past year, emphasis has been placed on the company's role as a real estate investment firm. Activity consists of 45 percent office, 26 percent retail, hotel and medical buildings, 13 percent manufacturing and 13 percent laboratories and research facilities. All developed space is leased to others.

10
(17)
\$394.00

Equitable Real Estate Investment Mgmt. Inc.
3414 Peachtree Road, N.E.
Suite 1000
Atlanta, GA 30326
Edward G. Smith, Exec. VP
Sam J. Steger,
VP, Devel. & Const.

Above figure includes \$65 million in reconstruction. Noted for its urban and suburban office developments throughout the U.S., this firm does no design or construction in house. Building methods include construction management, as well as competitive bidding and negotiated contracts for both design and construction. A current project is the second phase of California Center, a \$17.3 million suburban office building in Sacramento, Calif.

11
(16)
\$350.00

Prentiss/Copley Investment Group
1717 Main St.
Suite 5000
Dallas, TX 75201
John LeHigh, VP Const.

Construction volume estimated by BD&C. Firm substantially acquired all of the office and industrial assets of Cadillac Fairview Corp. in the U.S., including 58 properties and land for development with a market value of \$2.4 billion. Recognized for its office and mixed-use landmark buildings, about one-third of portfolio is now industrial. One recent project, One Atlantic Center, Atlanta, is a 50-story, 1.1 million-sq.-ft. office building.

12
(18)
\$333.00

Taubman Co. Inc.
200 E. Long Lake Road
P.O. Box 200
Bloomfield Hills, MI 48303
A. Alfred Taubman, Chmn.
Robert C. Larson, Pres.
Robert S. Taubman,
Exec. VP

Includes \$5 million in reconstruction. Total construction under way is approximately \$700 million. Known for its urban and suburban retail and mixed-use projects nationwide, 60 percent of activity was retail and 40 percent mixed-use projects. Recent projects include Marley Station, Ann Arundel County, Md., and a mixed-use tower at 712 Fifth Ave., New York City.

Koll Co. recently completed the first of two 12-story all-granite office towers at the Koll Center Irvine in Irvine, Calif.



Laurel Park by Schostak Brothers will be a mixed-use project with offices, retail space, theaters and hotels in Livonia, Mich.

13

(—)

\$325.00

Schostak Brothers & Co.
26913 Northwestern Hwy.
Suite 600
Southfield, MI 48034
Stephen J. Duczynski,
VP, Devel. Div., Dir., Devel.
Michael Polsinelli,
Asst. VP, Dir., Front End
Devel.

Known for its shopping centers in the Great Lakes states, the firm has been developing mixed-use projects in the past year. Above figure includes \$25 million of reconstruction. Activity includes half retail and half offices, with 100 percent of space leased out. Current major project is Laurel Park Place, a mixed-use development including two Marriott hotels in Livonia, Mich., with completion scheduled for 1989.

16

(23)

\$256.90

John W. Galbreath & Co.
180 East Broad St.
Columbus, OH 43215
Daniel M. Galbreath, Pres.
Donald W. Burbrink,
Sr. VP, Dir., Devel.

Firm develops corporate headquarters and investment office buildings as an owner/developer and consultant. Many projects are part of large mixed-use developments. Markets include Northeast, Midwest, Southeast and West. Above figure includes \$24 million of reconstruction. Because no construction is done in house, building methods include construction management from outside firms, competitive bidding and negotiated contracts for design and construction.

18

(—)

\$243.35

Zeckendorf Co. Inc.
55 East 59th St.
New York, NY 10022
William Zeckendorf Jr.,
Pres.
William Lie Zeckendorf, VP
Arthur Wm. Zeckendorf, VP

Known for large mixed-use and residential construction in Manhattan, firm is working on more office and hotel projects. Company does no design or construction in house, and 85 percent of activity includes mixed-use projects. Seventy-five percent of developed space is leased out. Current projects include the Royal Condoria Hotel and Crowne Plaza, both in New York City.

14

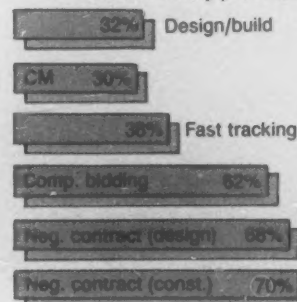
(34)

\$286.00

Crown American Corp.
131 Market St.
Johnstown, PA 15907
Nick Pasquerilla,
Sr. VP, Fac. Plng.
Carl Barefoot,
VP, Fac. Plng.

Acquired Millers and Snyders department stores and all were renamed Hess's Department Stores. Also entered office building market with Patrick Henry Corporate Center in Newport News, Va., and Henley Street office building in Knoxville, Tenn. More than 50 percent of design and construction are done in house, and 81 percent of space is leased out. Another recent project is the \$46 million Patrick Henry Mall, also in Virginia.

How many of the Diversified Developers use these delivery processes?



19

(25)

\$203.00

Tishman West Companies
10960 Wilshire Blvd.
Los Angeles, CA 90024
Perry S. Herst Jr.,
Chmn., CEO
Alan D. Levy, Pres., COO
James J. Newell,
Sr. VP, Plng. & Const.

Fiscal year ended June 30, 1988. A 50 percent interest of company was purchased by Balcor Co., a subsidiary of Shearson Lehman & Hutton. Opened offices in London and Atlanta and will expand to other regions of the country. More than 50 percent of construction done in house. Firm also uses negotiated construction contracts and fast-track scheduling.

15

(7)

\$279.00

Beacon Companies
50 Rowes Wharf
Boston, MA 02110
Norman B. Leventhal,
Chmn.

Construction subsidiary is Beacon Construction Co., Boston. Most projects in northeast U.S., but expanding nationally. Uses negotiated contracts for design, but 50 percent is done in house. Activity is 34 percent offices, 34 percent hotel/motel, 31 percent mixed-use and 1 percent retail. Two Boston projects include the 75 State St. office tower scheduled for completion this month and Rowes Wharf, a mixed-use facility completed in 1987.

17

(24)

\$254.71

Weitz Corp.
800 Second Ave.
Des Moines, IA 50309
Glenn H. DeStigter,
Pres., CEO

Weitz Co. Inc. is construction subsidiary, also based in Des Moines. With additional offices in Boston, Denver, Colorado Springs, Phoenix and West Palm Beach, the firm specializes in commercial, institutional, light industrial and multifamily housing projects throughout the U.S. Less than 50 percent of design, but all construction done in house. Currently under way is the \$30 million Central Iowa Racetrack in Des Moines.

20

(21)

\$200.00

Hartz Mountain Industries
400 Plaza Drive
P.O. Box 1411
Secaucus, NJ 07094
Keith Michels, VP, Design
Jim Herschdorfer,
VP, Const.

Known for developments in northern New Jersey within a three-mile radius of Manhattan, less than 50 percent of construction is done in house. Firm uses outside design/build firms, fast-track scheduling, competitive bidding and negotiated construction contracts. Activity is 40 percent warehouse, 40 percent mixed-use projects and 20 percent offices. Two recent mixed-use New Jersey developments include Lincoln Harbor in Weehawken and Harmon Meadow in Secaucus.

BetaWest opened new offices in Washington, D.C., and L.A.;
McKellar has new emphasis on larger projects with joint venture partners

21

(32)

\$191.00

Trizec Corp. Ltd.
700 Second St., S.W.
Calgary, Alberta T2P 2W2
Bob Christie, Sr. VP, Devel.
Dave Dawson, Devel. Mgr.

Construction volume estimated by BD&C. Firm is known for office buildings and shopping centers. Activity is mostly retail, followed by offices. Typically all developed space is leased out and no design or construction are done in house. Building methods include design/build from an outside firm, fast-track scheduling and negotiated contracts for construction.

24

(39)

\$175.00

Cabot, Cabot & Forbes
60 State St.
37th Floor
Boston, MA 02109
Ferdinand Colloredo-
Mansfeld, Chmn.
James Kenyon, Pres.

Subsidiary is Aberthan Construction Co., Boston. Subsidiary handles all construction in Massachusetts and San Francisco, but uses negotiated contracts for construction. Offices accounted for 50 percent of activity followed by high-tech industrial at 30 percent. Known for quality office buildings and suburban business centers, a new 300,000-sq.-ft. high-rise office in San Diego will be completed in approximately two years.

27

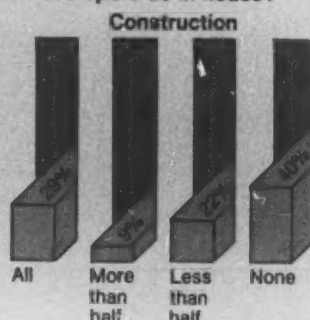
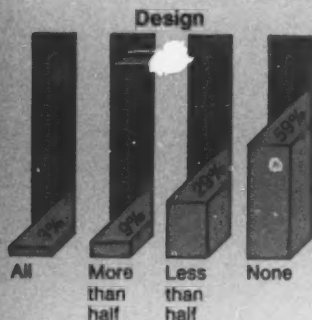
(29)

\$150.00

Duke Associates
8900 Keystone Crossing
Indianapolis, IN 46240
Bob Scannell,
Pres., Gen. Mgr.

Construction volume estimated by BD&C. Firm is known for office and industrial parks in the Midwest. Much construction is done in house by this privately owned firm. Additional building methods include design/build from an outside firm, competitive bidding and negotiated construction contracts. Activity emphasis is on offices. Typically all developed space is leased out.

How much work do the Diversified Developers do in house?



28

(49)

\$144.00

Paragon Group Inc.
7557 Rambler Road
Dallas, TX 75231
Jerry J. Bonner, Treas.

Recognized for its office buildings in the Southeast, firm does more than 50 percent of construction in house but no design. Cost of all projects under way is approximately \$187 million. Recent projects include Paragon Centre II, a 63,000-sq.-ft. office building in Louisville, Ky., and Eastwood Festival, a 330,000-sq.-ft. retail center in Birmingham, Ala.

22

(28)

\$180.00

Chiofaro Co.
One International Place
46th Floor
Boston, MA 02110
Theodore A. Oatis, Ptnr.

Construction volume estimated by BD&C. Specializing in large office developments, recent projects include One International Place, a 1 million-sq.-ft. high-rise office building in Boston and a 100,000-sq.-ft. office building, Two Technology Drive, in Westborough, Mass. Typically, firm leases all space that is developed.

25

(26)

\$162.00

DeMatteis Organization
EAB Plaza
West Tower, 15th Fl.
Uniondale, NY 11556-0102
Richard De Matteis, Pres.
Anthony Vaccarello, VP

Above figure includes no reconstruction. Located in Elmont, N.Y., construction subsidiary is Leon De Matteis Construction Corp. Less than 50 percent of design done in house. Firm uses negotiated contract for design. Most work is in New York, New Jersey and Connecticut. Activity consists of 40 percent offices followed by 35 percent multifamily residential and 15 percent mixed-use projects.

29

(20)

\$140.00

Century Development Corp.
5 Greenway Plaza
Suite 1700
Houston, TX 77046
C. Richard Everett, Pres.
Malcolm Stewart,
VP, Proj. Svcs.

Commercial offices in the South and Southwest are specialties of this privately owned firm. Century has a Houston-based construction subsidiary, Partners Construction Inc. (PCI). No design and less than 50 percent of construction done in house. The company also uses competitive bidding and negotiated construction contracts. Offices constituted 70 percent of activity, with 30 percent hospital/health care facilities.

23

(19)

\$175.00

Alan I. Kay Cos.
4520 E. West Highway
Suite 200
Bethesda, MD 20814
Alan I. Kay, Owner

Construction volume estimated by BD&C. Privately owned Kay typically leases all the space it develops. Little design or construction done in house. Building methods include design/build, construction management from outside firms, fast-track scheduling, competitive bidding and negotiated contracts for construction. Activity emphasis is on offices and mixed-use projects.

26

(55)

\$154.19

McKellar Dev. of La Jolla
1250 Prospect St.
Suite 103
La Jolla, CA 92037
Christopher S. McKellar,
Pres., CEO

All construction but less than 50 percent of design done in house by this privately owned firm. Of all space developed, 53 percent is sold while 47 percent is leased to others. Specializing in commercial office and multifamily projects in San Diego and Orange County, Calif., the company has a new emphasis on larger projects with financial joint-venture partners. Completed in November 1987 is a 500-unit residential development, Casa Blanca, in San Diego.

30

(61)

\$135.00

BetaWest Properties Inc.
1999 Broadway
Suite 2000
Denver, CO 80202
William Moore, VP, Design

Parent firm is U.S. West Inc., Englewood, Colo. Most work located in West and Midwest. New offices were opened in Washington, D.C., and Los Angeles. As no construction is done in house, building methods include design/build from an outside firm, fast-track scheduling, competitive bidding and negotiated contracts. Recently completed projects include three office buildings, One Pacific Place, Omaha, 150 S. Fifth Ave., Minneapolis, and PhoenixWest II, Phoenix.

31

(45)

\$130.00

Morton Buildings
Box 216
Watseka, IL 60970
Wayne Knepp, Mgr.
Ronald J. Sanders, Mgr.

This privately owned firm does more than 50 percent of design and construction in house. Other building methods include competitive bidding and negotiated contracts. Morton builds and sells all space that it develops. Warehouse/distribution centers constituted 30 percent of activity in 1987, with 20 percent made up of traditional manufacturing/industrial work. One recent project is the New Life Christian Center in Danville, Ill.

35

(—)

\$115.00

URBCO Inc.
140 Garden St.
Hartford, CT 06154
Klaus Kretschmann, Pres.
William R. Donohue,
VP, Proj. Officer

Parent firm is Connecticut Mutual Life Insurance Co., Hartford, Conn. Less than 50 percent of design and construction done in house. One hundred percent of all developed space is leased to others. Company is known for its mixed-use downtown projects, waterfront residential and commercial work, and suburban office parks. Activity includes 39 percent offices, followed by 30 percent mixed-use developments.

39

(56)

\$90.00

Martin Selig Real Estate
6200 Columbia Center
701 Fifth Ave.
Seattle, WA 98104-7090
Martin Selig, Owner

Recognized for its office buildings in the northwest U.S., firm does more than 50 percent of design but less than 50 percent of construction in house. Above figure includes \$20 million in reconstruction. One hundred percent of developed space is leased out. Also, activity is 100 percent offices. Two current projects in Seattle include the Blackstock and 4545 University Building. Both are scheduled to be completed in 1989.

32

(37)

\$124.00

Charles E. Smith Cos.
1735 Jefferson Davis
Highway
Arlington, VA 22202
Robert H. Smith, Pres.

Construction volume estimated by BD&C. This privately owned firm is known for work in northern Virginia. Firm typically does little design, but most construction in house. Offices account for most of activity and much of developed space is leased out.

36

(63)

\$100.00

Manufacturers Life Insurance Co.
200 Bloor St. East
Toronto, Ontario M4W 1E5
S. F. Dakin, VP RE
J. Paton, Devel. VP

With additional offices in seven U.S. cities, firm specializes in office buildings as developers, owners and managers. Offices account for all activity and 100 percent of developed space is leased out. No design or construction done in house. Recent projects include three office buildings in Washington, D.C., and one in Los Angeles.

33

(41)

\$118.58

Birtcher
27611 La Paz Road
Laguna Niguel, CA 92656
Ronald E. Birtcher,
Co-Chmn.
Arthur B. Birtcher,
Co-Chmn.
Andrew L. Youngquist,
COO, Birtcher Const.

Birtcher Construction is the firm's subsidiary. Known for its office, industrial, research and development projects, firm is most active in the Western U.S. In the past year, emphasis has been placed on high-rise, high-tech, mixed-use and retail projects. All construction is done in house, with 100 percent of space leased out.

37

(46)

\$95.00

Cali Associates
11 Commerce Drive
Cranford, NJ 07016-3599
John J. Cali, Sr. Ptnr.
Angelo R. Cali, Sr. Ptnr.
Edward Leshowitz, Sr. Ptnr.

Total projects under construction amount to approximately \$145 million. All construction, but less than 50 percent of design, for this privately owned firm done in house. Activity consists of 80 percent offices followed by 10 percent high-tech industrial. Cali Financial Tower, Jersey City, N.J., is a 621,000-sq.-ft. office building scheduled for completion in 1989-1990.

34

(31)

\$115.00

Boston Properties
8 Arlington St.
Boston, MA 02116
Edward H. Linde, Pres.
Robert B. Swett Jr.,
Exec. VP

Figure above includes \$10 million in reconstruction. With other offices in Washington, D.C., and New York, firm constructs office buildings and hotel developments. One hundred percent of developed space is leased to others. Activity consists primarily of offices. Two projects in Cambridge, Mass., are Three Cambridge Center, an office and retail building, and One Cambridge Center, a 215,000-sq.-ft. office building.

38

(30)

\$91.40

Bellemead Development Corp.
280 Corporate Center
4 Becker Farm Road
Roseland, NJ 07068
James Kearney, Pres.,
Const.
Henry Iggena, Sr. VP, Arch.

Parent firm is Chubb & Son Inc. located in Warren, N.J. Construction subsidiary is Bellemead Const. Corp., also in Roseland, N.J. Known for its commercial office buildings, firm does all construction and more than 50 percent of design in house. Offices accounted for 90 percent of activity, followed by 10 percent warehouses/distribution centers. Ninety-eight percent of developed space is leased to others and 2 percent is sold.

Pictured above is 599 Lexington Ave., a 50-story office building in New York City developed by Boston Properties.

*Bramalea opened a Chicago office and is planning a new building there;
Donohoe acquired Miller-Rhoads department store chain*

40

(—)

\$88.00

Fifield Development Corp.
225 W. Washington St.
Suite 1500
Chicago, IL 60606
Steven D. Fifield, Chmn.
Robert E. Smietana,
Exec. VP
Ralph L. Cincinelli, VP

Subsidiary is Interior Construction Corp., Chicago. No design and less than 50 percent of construction done in house. Additional building methods include fast-track scheduling, competitive bidding and negotiated contracts for both construction and design. Above figure also includes \$2 million in reconstruction. Activity is 80 percent offices and 10 percent hotel/motel.

43

(13)

\$80.00

Urban Investment & Development Co.
900 N. Michigan Ave.
Chicago, IL 60611
George A. Darrell, Exec. VP

Construction volume estimated by B&C. Parent company is JMB Realty Corp., Chicago. Firm is best known for office buildings, shopping centers and mixed-use developments. Firm's major project in the last year has been 900 N. Michigan Ave., a mixed-use development in Chicago. The anchor tenant in the recently opened shopping area of the development is Bloomingdale's. In addition to retail, the structure will contain hotel, office, residential and parking facilities.

47

(52)

\$73.80

Centre Development Co. Inc.
P.O. Box 802087
Dallas, TX 75380
Michael DeGrazier,
Jeffrey L. Swopes,
Exec. VPs, Ptnrs.

Above figure includes \$5 million in reconstruction. Company is best-known for mixed-use business parks and build-to-suit projects. No design or construction are done in house. Competitive bidding and negotiated contracts for design and construction are primary building methods. Warehouse/distribution centers accounted for 50 percent of activity, followed by offices at 20 percent. Firm is expanding to Chicago and Atlanta markets.

41

(53)

\$85.00

Tooley & Co.
3303 Wilshire Blvd.
12th Floor
Los Angeles, CA 90010
Craig Ruth, Pres.

Above figure includes \$5 million in reconstruction. Noted for its office buildings in California, firm does no design or construction in house. Building methods include design/build from an outside firm and negotiated contract for construction. Activity consists of offices (90 percent), followed by high-tech industrial (10 percent). All developed space is leased out. A recently completed project is the 16-story Howard Hughes Center in Los Angeles.

44

(59)

\$76.50

Jack Parker Corp.
104-70 Queens Blvd.
Forest Hills, NY 11375
Adam Glick, Pres.

This privately owned firm has two subsidiaries, Jack Parker Construction Corp. and Jack Parker Southeast Construction, Tampa. Best-known for residential projects in New York, New Jersey and Florida, activity is 65 percent multifamily residential followed by 15 percent offices. Currently under way is the International Business Center, a hotel and office complex in White Plains, N.Y., as well as two condominium complexes in Naples, Fla., Glen Cove and Willowbrook.

48

(38)

\$73.50

Carley Capital Group
315 W. Gorham St.
Madison, WI 53703
James Carley, Ptnr.
David Carley, Ptnr.

Activity is 60 percent mixed-use projects, 20 percent hotel/motel and 10 percent offices. Less than 50 percent of design and no construction done in house. Firm's building methods include design/build and construction management from outside firms, fast-track scheduling, competitive bidding and negotiated contracts for construction as well as design. Recently completed is the Hilton Hotel in Charlotte, N.C., and an upcoming project is Patriots Point, a hotel and marina in Charleston, S.C.

Centre Development completed phase four of the Texas Instruments Corporate Campus in Plano, Texas.

45

(—)

\$76.00

Centrum Properties
566 W. Adams St.
Chicago, IL 60606
Larry Ashkin, Pres.

Above figure includes \$6 million in reconstruction. This privately owned firm does no construction or design in house. Building methods include construction management from an outside firm, competitive bidding and negotiated contract for design. Activity consists of 33 percent offices, 33 percent retail and 33 percent multifamily residential. One hundred percent of developed space is leased out. A recent project is the 200,000-sq.-ft. shopping center, River Point Center, in Chicago.

49

(51)

\$73.00

Kevin F. Donohoe Co. Inc.
Curtis Center, Suite 700
Philadelphia, PA 19106
Kevin F. Donohoe,
Pres., CEO
J. Michael O'Brien,
Pres., Shopping Center Div.
Daniel P. Busch,
VP, Office Devel.

Above figure includes \$28 million in reconstruction. Firm acquired Miller Rhoads department store chain consisting of 16 stores in Virginia and North Carolina. Noted for its office and regional malls on the East Coast from the Carolinas to New England, the company is expanding to mid-South and Southeast U.S. Offices accounted for 50 percent of activity, followed by retail at 40 percent.

42

(22)

\$81.00

The Gotham Organization
201 East 42nd St.
New York, NY 10017
Joel I. Pickett, Pres.
William Conway,
Sr. Proj. Mgr.

Eighteen million dollars in reconstruction is included in above figure. Firm has two subsidiaries, Gotham Construction Corp. and Gotham Supervisory Construction Services Inc. Known for its high-rise apartment complexes, new and renovated hotels and hospital construction, firm's emphasis in the past year has been on development management. All construction but less than 50 percent of design done in house. Activity is 30 percent multifamily residential, 25 percent hospitals/health care and 20 percent hotel/motel.

46

(10)

\$75.00

Transpacific Development Co.
2377 Crenshaw Blvd.
Suite 300
Torrance, CA 90501-3326
Shurl Curci, Chmn.
Peter H. Adams, Pres.

Noted for its large-scale, mixed-use developments and high-rise office buildings in California, firm is expanding into Oregon. Activity is 100 percent offices, and all developed space is leased out. No design or construction is done in house. Building methods include design/build from an outside firm, fast-track scheduling, competitive bidding and negotiated contract for both construction and design.

50

(77)

\$70.50

Foster International Development Inc.
P.O. Box 67
Pittsburgh, PA 15230
William A. Robinette,
Pres., CEO

Above figure includes \$14 million in reconstruction. Offices accounted for 95 percent of activity. Ninety percent of developed space is leased out, with 10 percent sold. Negotiated contracts are used for design and construction as neither is done in house. Most projects of this privately owned firm are built on the East Coast and in Colorado.

51

(40)

\$70.00

Allstate Insurance Co.
Allstate Plaza, E-4
Northbrook, IL 60062
Kenneth S. Klimala,
Sr. Portfolio Mgr.

Parent firm is Sears, Roebuck & Co. Above figure includes \$10 million in reconstruction. Known for suburban office buildings, the company leases 100 percent of its projects to others. Activity is 100 percent offices. Less than 50 percent of design and construction are done in house. Competitive bidding is used for construction and negotiated contract is used for design.

55

(44)

\$55.00

Rosen Associates
333 Jericho Turnpike
Jericho, NY 11753
Robert A. Rosen, Pres.

Includes \$37 million in reconstruction. Best-known for shopping centers, firm has two subsidiaries, Androse Corp. and Rosen Associates Management Corp., both located in Jericho. Firm builds and leases 95 percent of developed space and sells 5 percent. In the past year, the company has expanded to managing centers for institutional owners. More than 50 percent of construction is done in house, but design/build and construction management from outside firms, fast-track scheduling, competitive bidding and negotiated contracts are also used.

52

(60)

\$66.14

Centennial Devel. Corp.
8391 Old Courthouse Road
Vienna, VA 22180
Pete T. Scamardo, Chmn.
Bill Sweetser,
Sr. VP, Const.
Jeff Arnold, Sr. VP, Devel.

Construction subsidiary is Centennial Companies, also located in Vienna, Va. Above figure includes more than \$2 million in reconstruction. Firm is best-known for office buildings and business parks in northern Virginia and is expanding into the outlying areas of northern Virginia. All construction is done in house; negotiated contracts are used for design. All projects under construction amount to approximately \$79 million.

56

(64)

\$53.00

Mulligan/Griffin
1700 Research Blvd.
Rockville, MD 20850
John F. Griffin, Pres.
George G. Mulligan, CEO

Firm is known for fast-track development of corporate headquarters facilities in Montgomery County, Md., and Fairfax County, Va., and is seeking to expand into Dulles, Va. No construction or design are done in house. Building methods include design/build from an outside firm and negotiated contracts for design and construction. Activity is 100 percent offices. All developed space is leased to others.

53

(71)

\$62.00

Bramalea USA,
Urban Properties Inc.
901 Main St.
Suite 5000
Dallas, TX 75202
Doug Salter, Pres.
Robert Sharp, Exec. VP

Parent firm is Bramalea Ltd. in Toronto. Known for its office building development and construction of large-scale office parks, firm does no design or construction in house. Uses competitive bidding and negotiated contracts for construction. Company recently opened an office in Chicago and is planning to develop a new office building there. Activity is 70 percent offices and 30 percent retail, with all developed space leased to others.

57

(58)

\$52.50

Bank of America Corp.
560 Davis St.
San Francisco, CA 94111
Dan Costello, Exec. VP

Figure includes more than \$38 million in reconstruction. With most work in California, this publicly traded firm does less than 50 percent of design and no construction in house. Uses competitive bidding and negotiated contracts for design and construction. Activity consists of 71 percent offices, followed by 20 percent retail.

58

(75)

\$50.00

Financial Investment Corp.
5530 Wisconsin Ave., N.W.
Washington, DC 20815
Robert J. Sinnenberg, Pres.

Construction volume estimated by BD&C. Firm is best-known for office buildings in Virginia, Maryland and Washington, D.C. Little construction and no design done in house by this privately owned company. Uses design/build and construction management from outside firms, fast-track scheduling, competitive bidding and negotiated contracts for construction.

54

(—)

\$60.00

Stein and Co.
208 S. LaSalle St.
Suite 1630
Chicago, IL 60604
Richard Stein, CEO
Mike Szkatulski,
VP, Devel.
Vince Ziolkowski,
VP, Design & Const.

Privately owned firm is known for office buildings in the Midwest. No design or construction are done in house. Building methods include fast-track scheduling, competitive bidding and negotiated contract for construction. Currently under way is the \$150 million AT&T Corporate Center in Chicago scheduled for completion October 1989.

Centennial Cos. recently completed
the Summit at Reston (Va.), twin
buildings totaling 300,000 square feet.

**59**

(67)

\$49.72

James-Lewis Corp.
1301 Lancaster Ave.
Berwyn, PA 19312
Lewis J. Brandolini III,
Pres., CEO
James B. Brandolini,
Exec. VP

Above figure includes more than \$5 million in reconstruction. Firm has four construction subsidiaries, all located in Berwyn, Pa. Less than 50 percent of design but all construction are done in house. Fast-track scheduling is also used. Half of developed space is leased out and the other half is sold. Activity consists of 25 percent multifamily residential, followed by retail (15 percent) and offices (15 percent).



Currently under construction is phase
I of AT&T Corporate Center in
Chicago. The 60-story structure was
developed by Stein and Co.

TOLD opens a new residential division

60

(72)

\$49.25

West*Group
1600 Anderson Road
McLean, VA 22102
G.T. Halpin, Pres.
C.B. Ewing, Jr., Exec. VP

Construction volume estimated by BD&C. Noted for office buildings in metropolitan Washington, D.C., Montgomery County, Md., and northern Va., firm is expanding its markets to Baltimore and Frederick and Richmond, Va. Activity is 100 percent offices. All developed space is leased out. All construction is done in house, but design/build from an outside firm is also used. Recent projects include Dulles Corporate Center at Dulles Airport and Springfield Corporate Center in Springfield, Va.

61

(62)

\$47.00

JBG Companies
1250 Connecticut Ave. N.W.
Washington, DC 20036
Robert H. Braunohler, Prin., Const. Svcs.
Lewis Rumford III, Prin., Oper.

Figure includes \$13 million in reconstruction. Offices constitute 100 percent of activity. Eighty percent of developed space is leased out, while 20 percent is sold. As no construction is done in house, building methods include design/build from an outside firm, fast-track scheduling, competitive bidding and negotiated contracts for design and construction.

62

(—)

\$44.20

Heller Construction Co. Inc.
205 Mill Road
Edison, NJ 08817
Ike Heller, Pres., CEO
Gary Alper, Sr. VP, Const.
Ron Roberts, Sr. VP

Firm is best-known for large distribution/manufacturing facilities. Work is concentrated in the New Jersey and New York metropolitan areas. All design and construction done in house by this privately owned company. Warehouses and distribution centers accounted for 100 percent of activity. All developed space is leased to others.

63

(50)

\$40.00

LaSalle Partners Ltd.
11 S. LaSalle St.
Chicago, IL 60603
Hossein Yousefi, Sr. VP
Jack Train, Sr. VP
Michael Clune, Sr. VP

Construction volume estimated by BD&C. Typically, much of firm's activity is offices, with most developed space being leased out. Firm has construction subsidiary, LaSalle Construction Corp., which does interior and renovation work. A recently completed project is a national landmark, Union Station, in Washington, D.C., a job in which La Salle Partners was a co-developer.

64

(66)

\$40.00

Lee Sammis Associates Inc.
8300 Greensboro Drive
Suite 1000
McLean, VA 22102
Mark Hassinger, VP, Devel.
Carl Beale, VP, Const.

Sammis Construction Co. in McLean, Va., is the firm's construction subsidiary. No design, but all construction, done in house. Firm uses negotiated contract for design. Offices and suburban R&D accounted for 100 percent of activity. The firm added an estimating department in the past year. Currently under way is a 200-acre office/R&D park, the Lafayette Business Center, located in Fairfax County, Va.

65

(—)

\$35.70

Santa Fe Pacific Realty Corp.
201 Mission St., 30th Fl.
San Francisco, CA 94105
J.K. Gwin, VP, Devel.
J.G. O'Gara, VP, Special RE Proj.

Parent firm is Santa Fe Southern Pacific Corp. of Chicago. Noted for its mixed-use buildings in Southern California, firm does no design or construction in house. Uses competitive bidding for construction. Warehouse/distribution centers account for 35 percent of activity, followed by offices at 25 percent. Phase II of the Pacific Design Center in West Hollywood, Calif., is scheduled to be completed this month.

66

(—)

\$38.00

The Sudler Cos.
75 Eisenhower Parkway
Roseland, NJ 07068
David S. Steiner, Exec. VP
Robert Applegate, VP, Const.
Jacob M. Block, VP, Arch.

Firm is best-known for corporate park developments in New Jersey and is expanding into retail. All construction and more than 50 percent of design are done in house. Company uses negotiated contract for design. Activity is 67 percent offices and 33 percent warehouse/distribution centers. Eighty-two percent of developed space is leased and 18 percent is sold.

67

(—)

\$36.73

Metropolitan Structures Inc.
111 E. Wacker Drive
Chicago, IL 60601
Gunter Reese, Pres., Const. Div.

Firm known for multiphase, mixed-use projects in the Midwest and West. Expanding to regions in the Southwest and Northeast. No design but more than 50 percent of construction are done in house. All developed space is leased out. Activity was predominantly offices at 50 percent, followed by hotel/motel at 22 percent. A future project will be the Lone Star office tower, a 1 million-sq.-ft. building in Dallas, projected to be completed in 1991.

68

(80)

\$35.00

TOLD Corp.
2587 Teller Road
Newbury Park, CA 91320
Pat Hall, Pres., TOLD Corp.
Trent Lyon, VP, Devel.
Larry Palmertree, Pres., TOLD Const.

Construction subsidiary is TOLD Construction. Firm is best-known for industrial buildings in California, Wisconsin and Minnesota. In the past year, the company has expanded by opening a new division, TOLD Homes, specializing in residential land development as well as single-family and multifamily houses. Of all space developed, 70 percent is leased to others and 30 percent is sold.

JBG Cos. recently completed renovation on the 59-year-old Washington Building on New York Street in Washington D.C.

69

(—)

\$34.30

**Clover Development
Assocs.**
1700 N. Moore St.
Suite 1905
Rosslyn, VA 22209
Edward L. Daniels, Ptnr.

No construction or design done in house by this privately owned firm. Building methods include construction management from an outside firm, competitive bidding and negotiated contracts for design and construction. Offices accounted for one-half of the activity and multifamily residential accounted for the other half. Company's work is concentrated in the Washington, D.C., metropolitan area.

73

(65)

\$28.69

Lincley Corp.
1030 Woodcrest Terrace
Drive
St. Louis, MO 63141
Richard C. Shepard,
Pres., CEO
Randall M. Griffin,
Exec. VP, COO

Company develops suburban office buildings and retail centers. With its corporate headquarters in Missouri, divisions are located in Denver, Kansas City, Cincinnati, Columbus and Cleveland. In late 1987, firm opened a full-service real estate office in Cleveland and asset management offices in Colorado Springs, Tampa and Louisville. Activity is 80 percent office and 20 percent retail.

77

(76)

\$24.00

Kilroy Industries
2250 E. Imperial Highway
El Segundo, CA 90245
John B. Kilroy Jr., Pres.
Terrance E. LaLonde,
Sr. VP, Proj. Devel.
Patrick N. Irvine,
VP, Const.

This privately owned firm develops office and high-tech space. Activity is 100 percent offices, and no design or construction are done in house. Current projects include Phase II of the Kilroy Airport Center in Long Beach, Calif., and the Hidden River Corporate Park in Tampa, Fla.

70

(—)

\$30.00

**MEPC American
Properties Inc.**
15303 Dallas Parkway
Suite 400 LB5
Dallas, TX 75248
Stephen F. Dahm,
VP, Const. & Devel.

Parent firm is MEPC plc in London. Firm noted for office complexes and regional shopping centers with most business in the Midwest and Southwest. However, there is a new market emphasis on the East and West coasts. As no design or construction are done in house, building methods include competitive bidding and negotiated contracts for construction. Activity is 100 percent offices, and all developed space is leased out.

74

(—)

\$28.60

Bay Colony Property Inc.
200 State St.
Boston, MA 02109
Donald F. Brigham, Sr. VP
Rudy A. Landry, Sr. VP
Thomas D. Robinson Jr., VP

Parent firm is Bay Financial Corp. in Boston. This publicly traded firm uses design/build and construction management from outside firms, fast-track scheduling, competitive bidding and negotiated contracts for design and construction. Activity is 90 percent offices, 4 percent high-tech industrial and 3 percent multifamily residential. Ninety-five percent of developed space is leased out and 5 percent is sold.

78

(—)

\$24.00

The Landmarks Group
One Concourse Parkway
Suite 600
Atlanta, GA 30328
W. Ed Walker, VP

This privately owned firm is known for office, hotel and retail projects in the Southeast and Midwest. No design or construction are done in house. Building methods include fast-track scheduling and negotiated contracts for design and construction. Activity is 100 percent offices, and all developed space is leased out. Recent Atlanta projects include the Concourse Corporate Center Five, a 32-story office building, and the Promenade Two, a 38-story office building scheduled for completion in 1990.

71

(—)

\$29.44

Welsh Companies Inc.
11200 W. 78th St.
Eden Prairie, MN 55344
E. Paul Dunn, VP, Devel.
Brad Baine, Pres.,
Welsh Const. Corp.
Dennis J. Doyle,
Pres., CEO, Welsh Cos.

Construction subsidiary is Welsh Construction Corp. All construction, but no design, done in house. Firm develops offices, office/showrooms and retail centers in Minneapolis/St. Paul. Offices accounted for 45 percent of activity, followed by manufacturing/industrial at 29 percent. Sixty-eight percent of developed space is leased and 32 percent is sold.

75

(—)

\$27.00

Memorial Corp.
5858 Westheimer, #703
Houston, TX 77057
James E. Floyd,
Chmn., Pres.
Richard Bard, Exec. VP
Stephen Healy, Sr. VP

Figure includes more than \$2 million in reconstruction. Subsidiary is Laurel Construction Services Inc. of Houston. Firm does health care projects and commercial offices in the South, Southwest and Southeast. Less than 50 percent of construction and no design done in house. Negotiated contract is used for construction. Activity includes 65 percent offices, 10 percent high-tech industrial and 25 percent hospitals/health care.

79

(78)

\$23.00

AIG Realty
72 Wall St.
New York, NY 10270
Norman Cicelsky, Dir., Arch.

Construction volume estimated by BD&C. Parent firm is American International Group Inc. This publicly traded firm uses design/build and construction management from outside firms, fast-track scheduling, competitive bidding and negotiated contracts for construction. No construction, but more than 50 percent of design, done in house.

72

(33)

\$29.00

McCormick Properties
11011 McCormick Road
Hunt Valley, MD 21031
Donald R. Clark, Pres, CEO
John H. Haas, Exec. VP,
COO
John Holmes,
Sr. Mktg., Devel. Mgr.

Figure includes \$3 million in reconstruction. Parent firm is McCormick & Co. Inc., also located in Hunt Valley. Firm has two subsidiaries, McCormick Const. Co. Inc. in Hunt Valley, Md., and Myers & Chapman Inc. in Charlotte, N.C. Company builds office buildings in suburban settings in Maryland, Washington, D.C., North Carolina, Pennsylvania and Florida. All construction but no design done in house. Of all developed space, 90 percent is leased and 10 percent is sold.

76

(73)

\$25.00

**Continental
Development Corp.**
2041 Rosecrans Ave.
P.O. Box 916
El Segundo, CA 90245
Richard C. Lundquist, Pres.

Figure includes \$14 million in reconstruction. Subsidiary is Continental Construction Corp., El Segundo, Calif. All construction but less than 50 percent of design are done in house. Building methods include design/build from an outside firm, fast-track scheduling, competitive bidding and negotiated contracts for design and construction. Work consists of office buildings and office parks in the Los Angeles airport area and San Francisco.

80

(—)

\$22.50

**Leon N. Weiner
and Associates Inc.**
Edgemart Building
4 Denny Road
Wilmington, DE 19809
Leon N. Weiner, Pres.
Irwin Mazer, VP, Const.

Construction subsidiary is LNW & A Construction Corp. This privately owned firm is known for its work in Delaware, New Jersey, Pennsylvania and Maryland. No design, but more than 50 percent of construction, done in house. Activity includes 25 percent hotel/motel and 25 percent multifamily residential. All developed space is sold.

RETAIL DEVELOPERS

ACTIVITY REGISTERS MODEST GAIN

Average firm's volume of \$162.3 million was nearly 5% higher than a year earlier

1

(—)

\$702.60

Dayton Hudson Corp.
777 Nicollet Mall
Minneapolis, MN 55402
James T. Hale, Sr. VP

In the fiscal year ending Jan. 30, 1988, a record 104 new stores opened, increasing total retail space by 21 percent. The Target division added a record number of new stores, including 50 in California that were acquired in a 1986 transaction. The Mervyn's division opened 24 new stores and the Lechmere division opened seven. Three Dayton's stores and 10 Hudson's stores underwent major remodeling.



Wal-Mart Stores' 222,000-sq.-ft. Hypermart USA in Topeka, Kan., is organized into four color-coded "stores within a store." It was designed by BSW Architects of Tulsa. Photo: Jon Peterson

2

(—)

\$527.90

Wal-Mart Stores Inc.
Bentonville, AR 72716
Tom Seay, Sr. VP, RE & Const.
Robert Murphey, VP, Const.

Total retail space was expanded to 77.8 million square feet, a net increase of 14.5 million square feet, or 23 percent, from the previous year. Store openings included 134 new Wal-Marts, 35 Sam's Wholesale Clubs, six Discount Drugs and two Hypermart USAs. Company's store renovation and update program included 25 expansions, 23 remodels and 77 stockroom additions.

4

(1)

\$352.00

Kroger Co.
1014 Vine St.
Cincinnati, OH 45202
Lorrence Kellar, Grp. VP
T. Kaczmarowski, VP, Fac. Eng.

Volume was estimated by BD&C. Total square footage reached 48.6 million, up 9.5 percent, and activity reflected company's commitment to larger-sized combination food and drug stores. Ten existing stores were expanded, and 67 others were remodeled. New units that opened in Cincinnati, Fort Worth and Lexington, Ky., are prototypes for future stores.

6

(12)

\$307.59

Melvin Simon & Associates
P.O. Box 7066
Indianapolis, IN 46207
C. Weisiger, VP, Design, Engr., Const.
L.E. Barstow, Dir., Renovations, Expansions

Retail projects were 55 percent of company's activities and mixed-use projects were 45 percent. Projects completed in 1988 include the 750,000-sq.-ft. West Ridge Mall in Topeka, the 450,000-sq.-ft. first phase of Rolling Oaks Mall in San Antonio and the 600,000-sq.-ft. Sunland Park Mall in El Paso.

3

(7)

\$368.00

Rouse Co.
10275 Little Patuxent Pkwy.
Columbia, MD 21044
R. Bruce Armiger, VP, Const., Eng.
James Whitcome, VP, Assoc. Dir.

Opened the 180,000-sq.-ft. Bayside Marketplace retail center in Miami, the 126,000-sq.-ft. Jacksonville (Fla.) Landing, the Gallery at Harborplace in Baltimore and Westlake Center, a mixed-use development in Seattle. The new Underground Atlanta retail center will open in 1989.

5

(2)

\$317.20

Sears, Roebuck and Co.
Dept. 824FC, Sears Tower
Chicago, IL 60684
Claude Ireson, VP, Fac. Png.

Selling space was expanded by 700,000 square feet. During 1987 company opened 19 new department stores — 10 in new markets and nine relocations in existing markets. Of the new stores, four were full-line, 13 were medium-sized and two were hard-line stores. Also opened were 45 paint and hardware stores. At the end of 1987, company had 813 department stores in operation.

7

(4)

\$262.00

J.C. Penney Co.
P.O. Box 659000
Dallas, TX 75265
John A. Wells, Sr. VP & Dir., RE and Const. Svcs.

Volume was estimated by BD&C. During 1987, 11 department stores were opened and eight were closed. Expenditures to modernize existing stores totaled \$160 million, down from \$172 million the preceding year. Openings in early 1988 included stores in Morristown, Tenn., Camden, Ark., and Carrollton, Ga. Relocation of corporate headquarters from New York City to Dallas was completed in mid-1988.

K mart Corp. opened 258 new specialty stores

8

(9)

\$250.00

K mart Corp.
3100 W. Big Beaver Road
Troy, MI 48064
M. Skiles, VP, Fac.
J. Vachon, Mgr., Const.

During 1987 company opened 36 K mart stores and refurbished 137. It also opened 258 new specialty stores, consisting of Waldenbooks, Builders Square and Pay Less Drug Stores, with plans to open another 172 units during 1988. Company entered into a partnership with Bruno's, a leading food retailer in the Southeast, to develop American Fare hypermarket concept stores.



May Centers Inc., the real estate division of May Department Stores Co., opened a 342,000-sq.-ft. addition to Mid Rivers Mall in St. Peters, Mo. Hellmuth, Obata & Kassabaum was the architect. Photo: HOK Photography

9

(—)

\$228.00

May Department Stores Co.
611 Olive St.
St. Louis, MO 63101
Dean Wolfe, Exec. VP, RE
J. Rutenis, Pres., May
Design & Construction Co.

The company opened 13 department stores, nine discount stores, 229 specialty stores and one shopping center in 1987. Openings planned for 1988 included seven department stores, seven discount stores and approximately 240 specialty stores. During the period 1987 through 1991, company plans capital expenditures of \$1.9 billion.

11

(13)

\$190.00

Leo Eisenberg Co.
1101 Walnut St. - Suite 800
Kansas City, MO 64106
Marty Goodman, Pres.
Irv Maizlish, Chmn.

Completed \$150 million of new construction and \$40 million of reconstruction. Current projects include a 134,000-sq.-ft. discount center in Evergreen, Colo., a 260,000-sq.-ft. discount center in Charleston, S.C., 100,000-sq.-ft. centers in Winchester, Ky., and Tucson, Ariz., a 250,000-sq.-ft. center in Warminster, Pa. and a 70,000-sq.-ft. center in Bedford, Va.

13

(14)

\$144.90

Walgreen Co.
200 Wilmot Road
Deerfield, IL 60015
W. Shiel, VP, Fac. Devel.
T. Bergseth,
Dir., Fac. Ping.

Activity during the fiscal year ending Aug. 31, 1988, consisted of 115 new drugstores and restaurants and 80 major remodelings. In current fiscal year, 100 new drug stores and 90 to 100 remodelings are planned. Company recently sold its Wag's restaurant division to Marriott Corp. More than 50 percent of design and construction is done in house.

10

(8)

\$193.67

Albertson's Inc.
P.O. Box 20
Boise, ID 83726
Wendell E. Hornecker,
Sr. VP, Design, Const.

In the fiscal year ending Jan. 28, 1988, company continued its emphasis on combination units and superstores, with stores opened having an average size of 47,300 square feet. Future plans call for the construction of combination units, superstores and a few warehouse stores. Construction of a 555,000-sq.-ft. distribution center in Gresham, Oregon, was completed.

12

(—)

\$179.00

Campeau Development Corp.
7 W. Seventh St.
Cincinnati, OH 45202
John P. Boorn, Chmn., CEO
R. Javosky, Sr. VP, Design

Volume was estimated by BD&C and reflects activity of Allied Stores Corp., which Toronto-based Campeau Corp. acquired in 1986, and Federated Department Stores, which Campeau acquired in May 1988. Campeau Development Corp. was formed in September to be the principal real estate development entity of Campeau Corp. in the U.S.

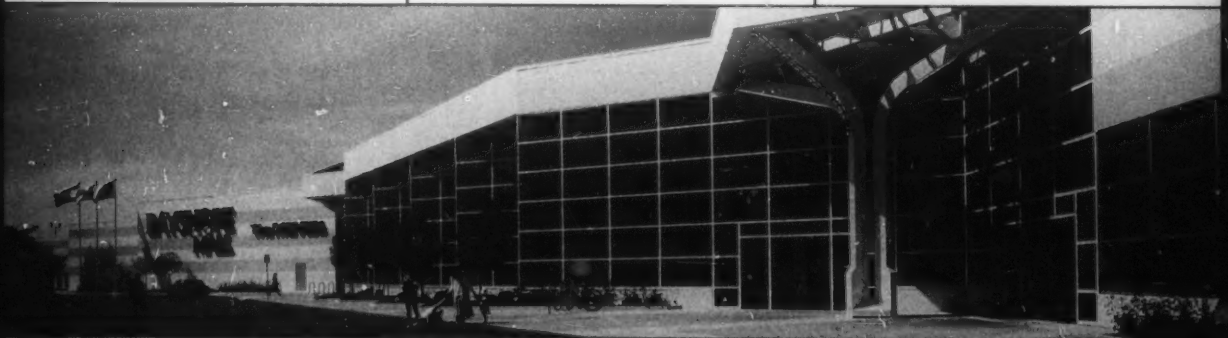
14

(18)

\$115.00

General Growth Cos.
215 Keo
Des Moines, IA 50306
Martin Bucksbaum, Chmn.
Matthew Bucksbaum, Pres.

Completed the 500,000-sq.-ft. Bayshore Mall in Eureka, Calif., in late 1987. Projects completed in 1988 include the 900,000-sq.-ft. Bellis Fair Mall in Bellingham, Wash., and 100,000-sq.-ft. additions at Mall of the Bluffs in Council Bluffs, Iowa, and the Empire Mall in Sioux Falls, S.D.



The 520,000-sq.-ft. Bayshore Mall in Eureka, Calif., was developed by General Growth Companies.

15

(21)

\$96.00

Edward J. DeBartolo Co.
7620 Market St.
Youngstown, OH 44512
 F. Zdrojowski, VP,
 Eng., Purch., Const.
 J. Sebastian, VP, Const.

Volume was estimated by BD&C. Completed the multilevel, 811,000-sq.-ft. New Orleans Centre Mall, the 1 million-sq.-ft. Rivercenter multilevel mall in San Antonio and the 1 million-sq.-ft. Lakeland Square Shopping Center in Lakeland, Fla. Scheduled for completion in 1989 is the 660,000-sq.-ft. Biltmore Plaza convenience/theme center in Asheville, N.C.

19

(23)

\$55.00

Lat Purser & Associates Inc.
230 S. Tryon St.
Charlotte, NC 28202
 Lat W. Purser III, VP
 S. Mercer, Const. Super.

In fiscal year ending March 31, 1988, company put in place \$50 million of new construction at 15 shopping centers and did \$5 million of reconstruction at three centers. Current projects include Spring Valley Commons, a 90,000-sq.-ft. center in Columbia, S.C., and Lincoln Center, a 186,000-sq.-ft. center in Lincolnton, N.C.

*Nearly half of the
 firms do less than 50%
 of their design and
 none of their
 construction in house.*

16

(17)

\$95.00

Winn-Dixie Stores Inc.
5050 Edgewood Court
Jacksonville, FL 32203
 Cecil Burns, Dir.,
 Store Design

Volume was estimated by BD&C. During the year ending June 29, 1988, 59 stores averaging 38,600 square feet were opened and 43 stores were enlarged or remodeled. A 297,000-sq.-ft. addition to a distribution center in Montgomery, Ala., was completed and a general merchandise facility in Greenville, S.C., received a 103,000-sq.-ft. addition. A Pompano, Fla., distribution center is being expanded.

20

(16)

\$54.48

American Stores Properties
19101 Von Karman Ave.
Irvine, CA 92715
 Ralph Davis, Pres.

Previously listed as American Superstores Development Co. Ten large drug/food combination stores were opened in the fiscal year ending Jan. 30, 1988. Extensive store renewal program involved a total of 147 stores, consisting of 57 Alpha Beta units, 56 Acme Markets, four Star Markets, five Jewel Food Stores and 25 Osco Drug Stores. Company headquarters were relocated from Salt Lake City.

21

(19)

\$50.00

Montgomery Ward & Co.
844 Larabee St.
Chicago, IL 60671
 Don Docken, VP,
 Merchandise Presentation
 Norman Abplanalp, Mgr.,
 Concept Design

About 80 percent of activity was reconstruction. Current projects involve three stores in Indianapolis, a 120,000-sq.-ft. store in Fort Smith, Ark., a 90,000-sq.-ft. store in Waukegan, Ill., six 10,000-sq.-ft. auto centers and about 30 remodeling projects at various locations.

17

(15)

\$88.00

TRF Pacific Inc.
12400 S.E. 38th St.
Bellevue, WA 98009
 Charles E. Hart, VP

Company name changed from the Rainier Fund. Projects completed include the \$78 million, five-story Anchorage 5th Avenue Mall, the \$6 million Westgate South mall in Tacoma, Wash., the \$9 million Crossroads Plaza in Pico Rivera, Calif., and the \$33 million Mountain Square mall in Upland, Calif. Under development are a \$35 million mall in Puyallup, Wash., and a \$20 million medical/retail center in Seattle.

Edward J. DeBartolo Corp. opened the 1 million-sq.-ft. Rivercenter multilevel retail center in San Antonio in February 1988.

18

(20)

\$61.00

Revco Drug Co.
1925 Enterprise Pkwy.
Twinsburg, OH 44087
 M. Solganik, Sr. VP, RE
 G. Just, Dir., Const.

Activity was 90 percent to lease in buildings built to company specifications, 10 percent build to own. More than 50 percent of design, but less than 50 percent of construction, is done in house. Company operates about 2,000 drug stores nationwide. Parent company recently went private in a leveraged buyout.



Price Development Co. opens centers in Washington, Utah and Idaho; Herring Marathon Group completes regional mall in Little Rock

22

(26)

\$40.50

Price Development Co.
35 Century Parkway
Salt Lake City, UT 84115
John Price, Chmn.
Carl Olson, Sr. VP, Devel.

Activity involved 830,000 square feet of new construction and 120,000 square feet of reconstruction. Completed the 395,000-sq.-ft. Three Rivers Mall in Kelso, Wash., the 206,000-sq.-ft. River Point Plaza Mall in West Jordan, Utah, and the 204-store Boise (Idaho) Town Square.

25

(26)

\$25.00

Herring Marathon Group
13355 Noel Road
Dallas, TX 75240
David Stautz,
Sr. VP, Design & Devel.
B. Tracy, Const. Mgr.

New construction was 40 percent of activity, and reconstruction 60 percent. Completed the 640,000-sq.-ft. Park Plaza regional mall in Little Rock. Scheduled for completion in 1989 are the 500,000-sq.-ft. Shawnee (Okla.) Mall, the 700,000-sq.-ft. Westwood Mall in Houston and the 1.3 million-sq.-ft. Vista Ridge Mall in Lewisville, Texas.

28

(—)

\$20.00

TCC Center Companies Inc.
111 Third Ave. South
Minneapolis, MN 55401
D. Everson, Dir., Const.
D. McChane, Dir., Design

New construction and reconstruction were each half of total activity. Projects completed in 1987 included the \$8 million Northpark in Joplin, Mo., the \$3 million Roosevelt in Jacksonville, Fla., and the \$11 million Makai Market in Honolulu. Current projects include a total of \$109 million of work at the Southdale and Rosedale shopping centers in the Minneapolis area.

23

(29)

\$34.96

F.W. Woolworth Co.
233 Broadway
New York, NY 10279
J.R. Geist,
Asst. VP, Const.
K.L. Ledebuhr,
Dir., Const.

Existing stores represented 57 percent of activity, and new stores the remaining 43 percent. Current work includes 6,000-sq.-ft. Woolworth Express Stores and specialty stores with 800 to 1,500 square feet of retail space. More than 50 percent of design, but less than 50 percent of construction, is done in-house.

26

(11)

\$24.00

Great Atlantic & Pacific Tea Co.
2 Paragon Drive
Montvale, NJ 07645
Peter O'Gorman,
Sr. VP, Devel.
D. Sorenson, VP, Const.

In the fiscal year ending Feb. 27, 1988, reconstruction was 58 percent of activity and new construction was 42 percent. During the current fiscal year, about \$200 million will be spent on new store development, enlargement and remodeling, involving 36 new stores and remodeling or expansion of more than 100.

29

(—)

\$20.00

Tucker Companies Inc.
40 Skokie Blvd. - Suite 600
Northbrook, IL 60062
Larry Tucker, Dir., Const.

Completed Carson Pirie Scott store at Chicago Ridge Mall and 250,000 square feet of retail at the Commons of Chicago Ridge, both in Chicago Ridge, Ill., and the \$2.5 million Shops on Elm Place in Highland Park, Ill. Under construction is the \$4 million Oaks of Oak Brook retail center. All buildings were built for lease to others. All activity consisted of new construction.

24

(24)

\$29.00

Carter Hawley Hale Stores
550 S. Flower St.
Los Angeles, CA 90071
J. Scott Meyer, Sr. VP,
Store Plng. & Const.
R Turner, VP, Const.

Reconstruction represented 59 percent of activity, new construction 41 percent. Opened 140,000-sq.-ft. store in Charlotte, N.C., and completed modernization of 180,000-sq.-ft. store in Santa Clara, Calif. A 100,000-sq.-ft. store in Colonial Heights, Va., is scheduled for completion in 1989.

27

(30)

\$22.00

Spatz & Co.
500 Skokie Blvd.
Northbrook, IL 60062
Barry Herring, Exec. VP
Wendy Spatz, VP, Design

Retail buildings were 90 percent of activity and office buildings 10 percent. Current projects include the 800,000-sq.-ft. Orland Park (Ill.) Place Mall, the 400,000-sq.-ft. Paradise Mall in West Bend, Wis., the 200,000-sq.-ft. Shopko Plaza in Neenah, Wis., and a 50,000-sq.-ft. strip center in LaJolla, Calif. All projects were built for lease to others.

30

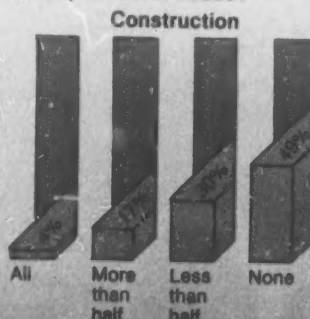
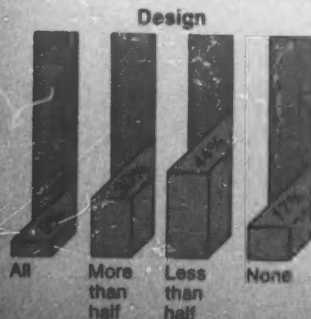
(—)

\$15.00

Skinner & Broadbent Co.
201 N. Illinois St.
Indianapolis, IN 46204
William Cooper, Exec. VP,
Const.
Michael Purpura, Proj. Mgr.

Volume was estimated by BD&C. Activity involved 350,000 square feet of new construction and 150,000 square feet of reconstruction. Projects completed in 1987 included 81,000 square feet of space at Hill's Department Store in Greenwood, Ind., 139,000 square feet of retail space at Lafayette Place in Indianapolis and 105,000 square feet of space at the Shops in Fort Wayne.

How much work do the Retail Developers do in house?



How many of the Retail Developers use these delivery processes?



INDUSTRIALS

CONSTRUCTION REMAINS STEADY AT \$6.6 BILLION

Plant modernization and consolidation programs figured prominently in their activities

1

(1)

\$586.50

Argonaut AEC
General Motors Corp.
485 W. Milwaukee Ave.
P.O. Box 9027
Detroit, MI 48202
Robert A. Valentine, Dir.
Frank A. Dyszewski,
Mgr., Arch & Eng. Svcs.

Automotive giant recently completed a 3 million-sq.-ft. assembly and stamping plant in Fairfax, Kan., an engineering center in Henrietta, N.Y., and an office and engineering building in Kokomo, Ind. More than 50 percent of design is done in house. All construction is contracted from outside firms. Firm currently has \$490 million in construction under way. GM's worldwide expenditures for property, plants and equipment totaled \$4.7 billion in 1987.

2

(4)

\$397.00

AT&T Technologies
222 Mt. Airy Road
Basking Ridge, NJ 07920
Gary Decker, VP, RE
Lyle Garcia, Dir.,
Eng., Design & Const.

Construction estimated by BD&C. AT&T's gross plant expenditures have totaled \$2.2 billion since the beginning of 1985, with \$500 million spent in 1987 alone. In 1987, firm continued phasing out older manufacturing facilities and consolidating distribution and repair facilities. AT&T owns a substantial number of its headquarters offices and, along with its subsidiaries, owns and operates 23 million square feet of manufacturing space in the U.S. alone.

3

(—)

\$319.90

E.I. duPont de Nemours & Co.
Rtes. 141 & 48
Barley Mill Plaza
Wilmington, DE 19805
Robert Miller, Dir.,
Project Eng.

Construction estimated by BD&C. Du Pont owns and operates manufacturing, processing, production, refining, marketing and R&D facilities throughout the world. Over \$3 billion was spent on property, plant and equipment additions during 1987, with the bulk devoted to its petroleum, fibers, agricultural and polymer divisions. Agricultural chemical research facilities were built in Newark, N.J., Delaware and Japan.

4

(10)

\$313.30

International Paper Co.
P.O. Box 160707
Mobile, AL 36616
William Harris,
Mgr., Eng.

Construction estimated by BD&C. Firm has spent over \$7 billion to expand and modernize its domestic manufacturing base in the last eight years. Capital expenditures for 1988 are anticipated to reach \$700 million, much of which will be used for continued plant modernization and maintenance programs. Firm acquired three businesses in 1987, including Arvey Corp., a manufacturer and distributor of paper products with 34 retail stores.

5

(—)

\$275.00

Bristol-Myers Co.
P.O. Box 4755
Syracuse, NY 13221-4755
Paul Lorenzo,
VP, Central Eng.

Eighty percent of the pharmaceutical company's construction was devoted to high-tech industrial facilities. Less than 50 percent of design and no construction were done in house. Firm currently has \$310 million worth of projects under construction. Nearly \$150 million of Puerto Rico-based chemical, manufacturing and production facilities will be completed in 1989. Firm owns nearly 8 million square feet of manufacturing space in locations as diverse as the Netherlands, Japan and Brazil.

6

(15)

\$250.00

Hewlett-Packard Co.
3000 Hanover St.
Palo Alto, CA 94304
Thomas C. Lauhon,
Dir., Corp. Fac.

No design or construction done in house. Twenty percent of dollar volume for fiscal year ending November 1987 involved reconstruction. Firm currently has \$500 million of construction under way in the U.S. and another \$200 million in foreign countries. Total investment in property, plant and equipment amounted to \$507 million. Firm occupies 30 million square feet of space worldwide.

7

(—)

\$236.80

Philip Morris Companies Inc.
120 Park Ave.
New York, NY 10017
Raymond Amico, Dir.,
Fac. Plng.

Construction estimated by BD&C. The tobacco, food and beer producer reported \$659 million of construction in progress during 1987, a significant portion of which was used for expansion and modernization of its food and cigarette manufacturing facilities. Manufacturing facilities within its General Foods division are being restructured to improve their operating efficiencies.



Among General Motor Corp.'s recently completed projects is a new 3 million-sq.-ft. auto assembly and stamping plant in Fairfax, Kan.

Eastman Kodak accelerates entry into pharmaceuticals market;
Pillsbury slows expansion of its restaurant division

Ford Motor Co.'s new \$49 million, electronic components plant in Lansdale, Pa., will be completed in 1989.

8

(2)

\$234.50

Construction estimated by BD&C. The tobacco and food giant reported \$41 million of building additions and leasehold improvements during calendar 1987 and added \$639 million of construction in progress for the same period. A new 2 million-sq.-ft. cigarette manufacturing plant in North Carolina became fully operational in 1987. Another manufacturing complex in Whitaker Park, N.C., is undergoing modernization, which is expected to be completed in 1989.

9

(5)

\$210.00

Ford Motor Co.
Plant Eng. Office
Rm. 646, WHQ
P.O. Box 1899
Dearborn, MI 48121
C.M. Dotterrer, Dir.,
Plant Eng.

Less than 50 percent of Ford's design and construction is done in house. Eighty-five percent of dollar volume figure above was for manufacturing facilities and \$30 million of it was devoted to reconstruction work. A \$49 million, 600,000-sq.-ft. electronic-component plant in Lansdale, Pa., will be completed in 1989. A \$100 million assembly plant in Avon Lake, Ohio, will be completed in 1990.

10

(6)

\$210.00

Rockwell International Corp.
2230 East Imperial Hwy.
El Segundo, CA 90245
Earl Beauvais, Mgr.,
Aerospace Fac.

Seventy percent of 1987's dollar volume involved reconstruction. Aerospace manufacturer reports another \$175 million in construction under way, the majority of which also involves reconstruction. Firm does less than 50 percent of design and construction in house. Among the firm's current projects are a 200,000-sq.-ft. graphics headquarters in Chicago and a \$30 million, 200,000-sq.-ft. strategic defense center in Seal Beach, Calif.

11

(12)

\$204.00

General Electric Co.
1 River Road
Schenectady, NY 12345
F.J. Talasco, Mgr.,
Eng. & Const.

Construction estimated by BD&C. For calendar 1987, G.E. added \$480 million in buildings and related equipment, including facilities and equipment from the newly acquired RCA. At year's end, \$796 million worth of plant construction and leasehold improvements were under way. Total property, plant and equipment additions reached \$1.8 billion in 1987. Domestic manufacturing operations are maintained at approximately 308 plants in 34 states and Puerto Rico.

12

(13)

\$197.00

PepsiCo Inc.
Anderson Hill Road
Purchase, NY 10577
Gordon McPhaden,
Dir., Fac. Const.

Construction estimated by BD&C. PepsiCo reported \$223 million in building additions worldwide for its soft drink, snack food and restaurant businesses and \$72.5 million in additions to construction under way. Through its divisions and subsidiaries, PepsiCo owns 55 manufacturing plants worldwide, as well as 30 food manufacturing and processing plants and 1,870 restaurants in the U.S. Recent acquisitions include Kentucky Fried Chicken and Seven-Up International.

13

(11)

\$194.00

McDonnell Douglas Corp.
P.O. Box 516
St. Louis, MO 07065
Gerald J. Olsen, Dir.,
Prop. & Fac.

Construction estimated by BD&C. The aerospace giant's building and fixture additions for calendar 1987 totaled nearly \$200 million, bringing the firm's total dollar value of buildings to \$1.4 billion. Recently completed facilities include a new 1.1 million-sq.-ft. assembly plant in Long Beach, Calif., and a 193,000-sq.-ft. plant in Salt Lake City. The firm owns nearly 28 million square feet of building space in five U.S. states and Canada.

14

(35)

\$191.90

Monsanto Co.
800 N. Lindbergh Blvd.
St. Louis, MO 63167
Hank Parisotto, Dir., RE

Construction estimated by BD&C. Monsanto's divisions and subsidiaries include agricultural, chemical, plastics and pharmaceutical companies. Firm either owns or operates over 100 plants and facilities worldwide. An applications development center for plastics opened in Springfield, Mass., during 1987 and a new automotive support center in Detroit is to open by the end of this year. Over \$500 million worth of ongoing construction was added during 1987.

15

(8)

\$182.00

Boeing Co.
East Marginal Way South
Seattle, WA 98108
Frank Waterworth,
Corp. Mgr., RE

Construction estimated by BD&C. During 1987, net additions to property, plant and equipment totaled \$759 million, including \$21 million in connection with the acquisition of ARGOSystems, a defense electronics firm. Boeing estimated that 1988 property, plant and equipment expenditures will reach \$850 million. Facilities expenditures will be allocated toward productivity improvement programs and R&D activities.

16

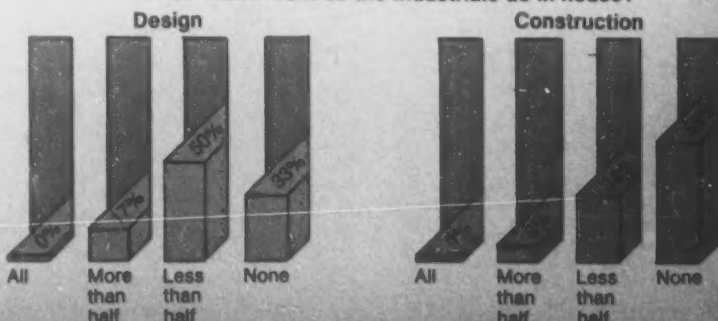
(32)

\$166.00

Georgia-Pacific Corp.
133 Peachtree St., N.E.
Atlanta, GA 30303
Richard M. George,
Dir., RE

Construction estimated by BD&C. Georgia-Pacific added \$190 worth of ongoing construction during 1987. Construction of a new byproduct gypsum wallboard plant near Las Vegas was completed in late 1987. Another such plant in Paradise, Ky., is expected to be completed at the end of 1989. Among its capital expenditures, Georgia-Pacific acquired U.S. Plywood Corp. for \$208 million.

How much work do the Industrials do in house?



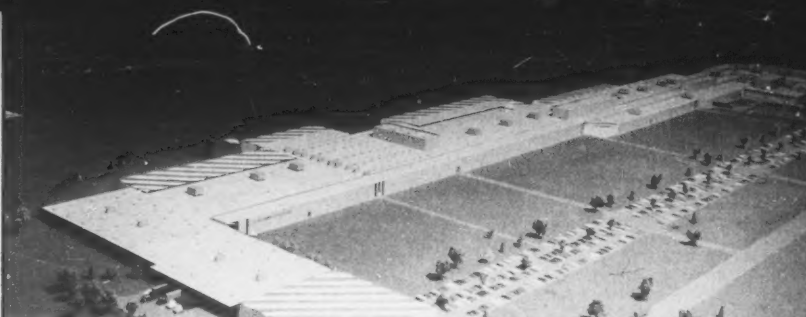
17

(21)

\$156.20

United Technologies Corp.
UT Building
Hartford, CT 06101
 Kenneth Rankin, Mgr.,
 Corp RE

Construction estimated by BD&C. UT is segmented into power, building, defense and space, aerospace, industrial and advanced technology groups. Included in the building group, elevator manufacturer Otis opened a 29-story research and test tower in Bristol, Conn., while Nippon Otis established an R&D center in Tokyo. Under a restructuring program, Otis divested 13 operations in Africa, Latin America and the Caribbean and has consolidated four manufacturing facilities.



Outlined in red above is the planned \$70 million expansion of Goodyear Tire & Rubber Co.'s radial tire plant in Lawton, Okla.

18

(17)

\$146.00

Eastman Kodak Co.
1669 Lake Ave.
Rochester, NY 14650
 Duane Roland,
 Mgr., Const. Div.

Construction estimated by BD&C. About one-third of Eastman Kodak's \$1.9 billion in capital expenditures for 1988 will support new products and capacity expansion. Firm is accelerating its entry into the pharmaceutical business. A new pharmaceutical complex that opened in 1987 will serve as the focal point for its R&D efforts. Construction of a new 150,000-sq.-ft. biotechnology plant in Cedar Rapids, Iowa, began in 1988.

21

(46)

\$110.60

Allied Signal Inc.
Columbia Road & Park Ave.
P.O. Box 4000R
Morristown, NJ 07960
 Ron Mallek, Dir., RE

Construction estimated by BD&C. Allied reported \$134 million in building additions for calendar 1987. Firm opened its first U.S. plant to manufacture biaxially oriented nylon film in Pennsylvania. Also opened was the \$40 million Charles W. Nichols Technology Center in Morristown, N.J., which enabled the firm to consolidate laboratories that had been housed in several older, less efficient buildings. In 1987, Allied completed its divestiture of operating units comprising its electronics and instrumentation sector.

23

(—)

\$104.00

Lockheed Corp.
4500 Park Granada Blvd.
Calabasas, CA 91399
 Richard Heilman,
 Corp. Dir., RE

Construction estimated by BD&C. Lockheed reported \$113.1 million in construction additions for fiscal 1987. During 1987, the aerospace firm dedicated a new \$87 million weapon systems simulation center and completed construction of a composites development center. Firm owns approximately 53 percent of its 40 million square feet in aggregate floor space, all of which is located in the U.S. Lockheed recently acquired Sanders Associates, a leading defense electronics company.

19

(19)

\$114.00

Pillsbury Co.
200 South Sixth St.
Minneapolis, MN 55402
 Paul Runice, Dir., RE

Construction estimated by BD&C. Pillsbury reported nearly \$160 million in building and improvement additions during 1987. Food expenditures have been largely for plant modernizations. Firm also has consolidated a number of food manufacturing plants. In restaurants, Pillsbury has slowed expansions. Firm withdrew from several developmental or marginal restaurant chains.

22

(—)

\$106.50

Digital Equipment Corp.
2352 Main St.
Concord, MA 01742
 Carl Stegerwald, Mgr.,
 Des. & Bldg.

Construction estimated by BD&C. Digital Equipment reported \$74 million in building additions and \$82.6 million in leasehold improvements for fiscal year ending June 1987. Firm occupies 33.6 million square feet of space worldwide, 68 percent of which is in the U.S. Forty eight percent of all space is owned. Approximately 9 million square feet of space for new manufacturing, engineering, sales and administrative facilities will be under construction or completed in 1988.

24

(29)

\$94.50

Motorola Inc.
1301 E. Algonquin Road
Schaumburg, IL 60196
 John Wiemhoff, Mgr.,
 RE, Const.

Construction estimated by BD&C. Nearly \$140 million in buildings and building equipment were added in calendar 1987. Motorola owns 14.4 million square feet of manufacturing and administrative space in the U.S. and another 4.3 million square feet in other countries. Motorola and Toshiba Corp. constructed a joint-venture manufacturing facility in Izumi, Japan, that opened this year. In 1987, firm's communications sector began construction on a new manufacturing research center in Schaumburg, Ill.

20

(41)

\$112.50

Johnson & Johnson
1 J&J Plaza
New Brunswick, NJ 08933
 John R. Wiese, VP,
 Fac. Ping & Const.

Construction estimated by BD&C. Johnson & Johnson reported \$279 million of construction in progress at the close of calendar 1987. Total additions to property, plant and equipment amounted to \$515 million, primarily to increase capacity of facilities for new and existing products. New facilities opened in China, Argentina and Claremont, Calif. Firm also spent \$700 million on business acquisitions, primarily to add new product lines or complement existing ones.



Allied Signal's new Charles W. Nichols Technology Center in Morristown, N.J., enabled the firm to consolidate several lab facilities.

Dow makes inroads into the personal care market; 3M opens a new business center in Singapore

25

(3)

\$93.70

Goodyear Tire & Rubber Co.
1144 E. Market St.
Akron, OH 44316
R.G. Nichols, Mgr.,
Corp. Eng.

Construction estimated by BD&C. Goodyear added \$37.7 million in buildings and \$212.8 million worth of in-progress construction for calendar 1987. Under way is the \$70 million expansion of a radial auto tire plant in Lawton, Okla. Firm is also negotiating to build another such plant in South Korea. A Detroit-based design center was opened in January 1987. Firm also sold its oil and gas reserves and its aerospace business for \$685 million and \$588 million, respectively.

29

(20)

\$80.60

TRW Inc.
1900 Richmond Road
Cleveland, OH 44124
Peter N. Steigerwald,
Dir., Fac. & Admin. Svcs.

Construction estimated by BD&C. Of TRW's 89 U.S. manufacturing facilities, 38 percent are used by its space and defense segment, 52 percent by its automotive segment. The balance is used for energy service related manufacturing. Firm owns 39 percent of domestic manufacturing space and 72 percent of foreign manufacturing space, the latter comprising 96 facilities in 17 countries. Total additions to buildings amounted to \$124 million for calendar 1987.

32

(—)

\$74.50

Archer Daniels Midland Co.
P.O. Box 1470
Decatur, IL 62525
Howard Buoy, VP, Eng.

Construction estimated by BD&C. The food processor added nearly \$12 million in buildings and \$160 million of construction in progress for fiscal year ending in June 1987. Construction of a co-generation plant in Mankato, Minn., and another in Des Moines recently was completed. A third plant in Lincoln, Neb., is to be completed by the end of this year. ADM has 113 processing plants in the U.S., 100 of which are owned. The company's foreign operations consist of plants in Canada, England, West Germany and the Netherlands.

26

(27)

\$87.20

Kraft Inc.
Kraft Court
Glenview, IL 60025
Ray Hermann, Dir., RE

Construction estimated by BD&C. Kraft invested a total of \$256 million in property, plant and equipment in 1987. Seventy percent of capital expenditures were for facility improvements and replacements, and approximately 30 percent for expansions. Kraft's technology center addition in Glenview was completed in 1987. Firm has spent \$1.3 billion in food acquisitions in the last two years, including purchases of All American Gourmet Co. and Anderson Clayton Foods.

30

(—)

\$80.00

Merck & Co. Inc.
P.O. Box 2000
Rahway, N.J. 07065
Larry Hughes, Sr. Dir.,
Corp. Eng.

Roughly 90 percent of dollar volume above is for new construction. Less than 50 percent of design and no construction are done in house. Laboratories and research facilities accounted for 60 percent of 1987 construction, while manufacturing and offices accounted for the balance. Recent projects include a \$40 million, 240,000-sq.-ft. lab and office complex in Rahway, N.J., and a 900,000-sq.-ft. headquarters in Readington, N.J.

33

(—)

\$70.70

Xerox Corp.
P.O. Box 1600
Stamford, CT 06904
Joseph Rooney, Mgr.,
RE Plng.

Construction estimated by BD&C. Xerox and its subsidiaries own or lease facilities totaling 45.1 million square feet throughout the United States, Canada, Latin America, Europe, the United Kingdom and other foreign areas. This includes manufacturing and R&D facilities, general purpose offices, and service and distribution centers. Approximately 80 percent of firm's space is devoted to its business equipment segment.

27

(44)

\$87.00

Raytheon Co.
141 Spring St.
Lexington, MA 02173
W. Carleton Bartow,
Dir., RE & Plng.

Construction estimated by BD&C. Raytheon's manufacturing, engineering, research, administrative and storage space totals approximately 27.3 million square feet, more than 90 percent of which is located in the U.S. Of that total, 62 percent of space is owned. Recent projects include a new \$45 million microwave circuit center in Andover, Mass. Major renovation was completed on a plant in Quincy, Mass., for design and production of hybrid microcircuits.

31

(—)

\$75.60

Caterpillar Inc.
100 N.E. Adams St.
Peoria, IL 61629
Gene Potenhauer,
Factory Eng. Mgr.

Construction estimated by BD&C. Capital expenditures for 1987 were \$467 million, a major portion of which was used for the company's factory modernization program. Capital expenditures were expected to increase to \$625 million as the firm continues its "Plant With a Future" strategy. Caterpillar reported \$300 million of construction in progress at the close of 1987.

34

(43)

\$70.00

Minnesota Mining & Manufacturing Co.
P.O. Box 33331, Bldg. 42-8
900 Bush Ave.
St. Paul, MN 55133
Clair R. Larson,
Exec. Dir., Fac. Eng.

Construction estimated by BD&C. 3M's spending for plant and equipment has totaled more than \$2.8 billion over the last five years. A major part of this investment involved increasing productivity in existing facilities. Firm's industrial and electronic sector opened a new technical, manufacturing and business center in Singapore. Firm also opened an automotive and aerospace center in West Germany.

28

(9)

\$83.20

Dow Chemical Co.
2030 Willard H. Dow Center
Midland, MI 48674
R.J. Kuerbitz,
Mgr., RE

Construction estimated by BD&C. Dow reported \$677 million of construction in progress at the end of 1987. Additions to property, plant and equipment totaled \$995 million. Slightly more than half of gross plant properties are located in the U.S. Dow made inroads into the personal care market with the acquisition of Lamaur Inc., a Minneapolis-based manufacturer of hair care products. The Dow agrichemical operation expanded into crop genetics with the acquisition of United Agriseeds Inc.

While aerospace, pharmaceutical and chemical firms collectively posted increases in construction, food and beverage, automobile and tobacco firms were down slightly in 1987.



Northrop Corp.'s new \$133 million, 750,000-sq.-ft. Georgia Production Center in Perry, Ga., will begin the manufacture of missiles in July 1989.

35

(49)

\$58.30

Northrop Corp.
1840 Century Park East
Los Angeles, CA 90067
Owen Muller, Dir., RE

Construction estimated by BD&C. Northrop reported \$294 million in property, plant and equipment additions during 1987. Firm's new \$133 million Georgia Production Center in Perry, Ga., is to become operative by July 1989. Firm owns approximately 60 percent of its 20 million square feet of space and leases the balance.

38

(—)

\$60.10

W.R. Grace & Co.
Grace Plaza
1114 Avenue of the Americas
New York, NY 10036-7794
Thomas Lawlor, Dir., Corp RE

Construction estimated by BD&C. W.R. Grace primarily engages in chemical, energy and health care related activities. Firm added \$163 million worth of construction in progress during 1987. In its chemicals division, current projects include a recently opened water treatment research facility in Lake Zurich, Ill., and a specialty chemicals plant in Shanghai, China. Under way is an \$8 million research center in Atsugi, Japan.

40

(26)

\$47.20

ITT Corp.
320 Park Ave.
New York, NY 10022
Robert Sheehy, VP, Exec. Dir., RE

Construction estimated by BD&C. ITT reported \$55 million in building additions during 1987 and nearly \$200 million of construction in progress at year's end. Gross property, plant and equipment expenditures are expected to total \$550 million in 1988. ITT's Sheraton Corp. opened hotels in China, Australia and Bulgaria.

41

(16)

\$45.10

Baxter Travenol Laboratories
One Baxter Parkway
Deerfield, IL 60015
Charles Cohlmeier, VP, Fac. Eng.

Construction estimated by BD&C. Baxter Travenol maintains a continuing program for improving its properties, including retirement or improvement of older facilities, as well as construction of new ones. Manufacturing facilities were recently established in the Dominican Republic and Costa Rica. Firm completely automated facilities in Oklahoma and Colorado. Nearly \$170 million of construction was under way at yearend.

36

(22)

\$62.30

American Home Products
685 3rd Ave.
New York, NY 10017
Walter Fleming, Dir., RE

Construction estimated by BD&C. Firm's 1987 building additions totaled nearly \$163 million. Included in that amount is the \$62 million purchase of an office facility in Radnor, Pa., as well as buildings related to the acquisitions of Express Foods, VLI and the Animal Health Care business of Bristol-Myers. Firm also recently acquired A.H. Robins Co. Total plant, property and equipment expenditures amounted to \$315 million.

39

(45)

\$58.50

Westinghouse Electric Corp.
Gateway Center
Pittsburgh, PA 15222
D.J. Flanders, Dir., Const. Dept.

Westinghouse does no design or construction in house. Approximately one-third of calendar 1987's dollar volume was for reconstruction. Construction involved office, manufacturing, high-tech, R&D and warehouse facilities. Firm concentrated on consolidation of manufacturing operations and installation of more highly productive facilities. Firm's first major facility to burn municipal solid waste to generate steam and electricity went on line in Bay County, Fla.

42

(—)

\$42.80

Colgate-Palmolive Co.
2045 Lincoln Highway
Edison Square North
Edison, NJ 08817
Stuart Hulke, Dir., Fac. Eng.

Construction estimated by BD&C. Company reported \$81 million in building additions for calendar 1987, but an overall net reduction in property, plant and equipment as a result of organizational realignments and disposition of certain investments. Firm opened a new \$49 million detergent plant in Cambridge, Ohio. Capital expenditures amounted to \$286 million in 1987, much of which was used to streamline manufacturing processes by modernizing plant facilities.

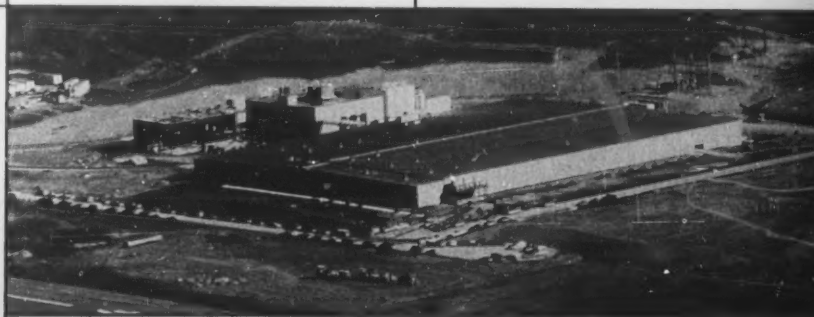
37

(—)

\$60.50

Weyerhaeuser Co.
Tacoma, Wash. 98477
Bill Cable, Eng., Capital Support Grp.

Construction estimated by BD&C. Weyerhaeuser reported nearly \$67 million in building additions for 1987 and reported \$262 million of construction in progress at year's end. Within its Forest Products division, significant projects in 1987 included the completion and start up of a particleboard facility in Moncure, N.C., and of an export mill in Aberdeen, Wash. Construction is also under way on a laminated components plant in Cottage Grove, Ore., and a saw mill in Greenville, N.C.



Colgate-Palmolive's recently opened liquid detergent plant in Cambridge, Ohio, is expected to save the firm \$20 million annually.

PPG expands its presence in the Far East; Dresser increases its focus on energy-related industry

43 (—) \$42.40	USG Corp. 101 S. Wacker Drive Chicago, IL 60606 J.L. Brophy, Mgr., RE Admin.	How many of the Industrials use these delivery processes? <table><tr><td>Design/build</td><td>75%</td></tr><tr><td>CM</td><td>75%</td></tr><tr><td>Fast tracking</td><td>63%</td></tr><tr><td>Comp. bidding</td><td>100%</td></tr><tr><td>Neg. contract (design)</td><td>75%</td></tr><tr><td>Neg. contract (const.)</td><td>75%</td></tr></table>	Design/build	75%	CM	75%	Fast tracking	63%	Comp. bidding	100%	Neg. contract (design)	75%	Neg. contract (const.)	75%	48 (—) \$37.00	Dresser Industries 1600 Pacific Dallas TX 75201 Carroll M. Browning, Sr. VP., Oper.
Design/build	75%															
CM	75%															
Fast tracking	63%															
Comp. bidding	100%															
Neg. contract (design)	75%															
Neg. contract (const.)	75%															
Construction estimated by BD&C. USG reported \$42 million in building additions for calendar 1987 and \$43 million of construction in progress at year's end. Firm is focusing on growth opportunities in building materials market. In 1987, plant expansions were completed in Story Point, N.Y., Fort Dodge, Iowa, and another expansion was begun in Sperry, Iowa. USG Interiors Inc. acquired a specialty wood products company.		Construction estimated by BD&C. Dresser reported \$48 million in building additions for fiscal year ending Oct. 31, 1987. Firm maintains more than 90 manufacturing plants worldwide, totaling more than 21 million square feet. The majority of manufacturing plants are owned, while most sales and warehouse facilities are leased. As part of its increased focus on energy-related businesses, Dresser acquired the M.W. Kellogg Co., a process engineering and construction firm, for \$115 million.														
44 (24) \$40.70	PPG Industries Inc. One PPG Place Pittsburgh, PA 15272 Richard Marks, Mgr., RE	46 (—) \$36.30	ConAgra Inc. One Central Park Plaza Omaha, NE 68102 Robert J. White, VP, Corp. Plng. & Dev.	49 (25) \$37.00	General Dynamics Corp. Pierre Laclede Center St. Louis, MO 63105 Bob Gallo, Corp Dir., Fac.											
Construction estimated by BD&C. PPG has been rapidly expanding its presence in the Far East. During 1987 the company formed joint ventures to build a worldscale fiber glass manufacturing facility in Taiwan and the region's largest caustic soda plant. A joint-venture manufacturing plant also opened in Shekou, China. Firm reported \$61.2 million in building additions for 1987 and \$143 million of construction in progress at year's end. PPG made several acquisitions in 1987, including Allegheny Intl. Inc., a medical technology firm.		Construction estimated by BD&C. ConAgra's businesses consist of three segments: agriculture, trading and processing, and prepared foods. Firm reported \$193 million of building, machinery and equipment additions for fiscal year ending in May 1988. In Omaha, construction continues on firm's new corporate headquarters, which will include a product development laboratory, as well as headquarters space for its independent operating companies.		Construction estimated by BD&C. Firm's total property, plant and equipment expenditures amounted to nearly \$350 million for calendar 1987. Among recently completed building projects is a \$33 million, 450,000-sq.-ft. central office complex in Sterling Heights, Mich.												
45 (—) \$40.00	Eli Lilly & Co. Lilly Corporate Center Indianapolis, IN 46285 John G. Schumm, Dir., Const. Eng.	47 (30) \$37.10	Procter & Gamble Co. One Procter & Gamble Plaza Cincinnati, OH 45202 D.S. Swanson, Sr. VP., Mgr. Eng.	50 (—) \$31.90	Union Carbide Corp. 39 Old Ridgebury Road Danbury, CT 06817-0001 John B. Powers, VP, Plng.											
One quarter of firm's dollar volume was devoted to reconstruction. Forty percent of construction involved laboratories and research facilities. Firm does less than 50 percent of design and no construction in house. Approximately \$100 million in construction currently is under way in the U.S. Completed in 1987 was a new \$44 million R&D facility in Indianapolis. An \$11 million office renovation was completed in the fall of 1988.		Construction estimated by BD&C. P&G reported \$53 million in building additions for fiscal year ending June 30, 1987. Firm owns and operates manufacturing facilities at 53 locations in 24 states. It has an additional 61 manufacturing plants in 22 other countries. To further penetrate the health and beauty care market in Europe, P&G acquired the Blendax Group in Mainz, Germany, and the worldwide rights to the Bain de Soleil sun care line for \$408 million.		Construction estimated by BD&C. Union Carbide reported \$35 million in building additions for calendar 1987. Firm's two largest projects in progress during 1987 involved the construction of air separation plants in Europe and Brazil. Construction and investment expenditures were anticipated to reach \$700 million in 1988.												

Eli Lilly & Co.'s new \$44 million process R&D facility in Indianapolis was completed in September 1987.

MULTIFAMILY DEVELOPERS

VOLUME DECLINES 18%

On the heels of a 15% drop a year earlier, the average firm's activity fell to \$126.3 million of put-in-place construction

1

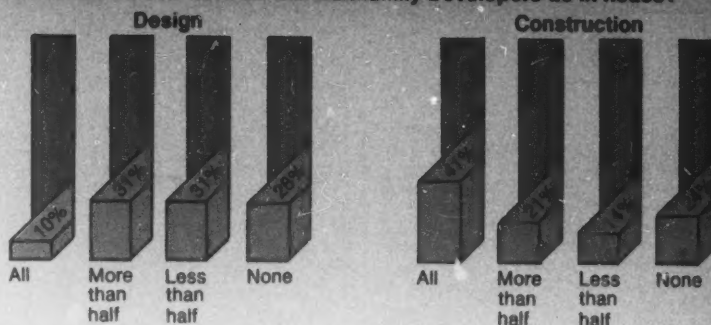
(1)

\$789.45

Trammell Crow Co.—
Residential
3500 LTV Center
2001 Ross Ave.
Dallas, TX 75201
J.R. Terwilliger,
Managing Partner
R. Speicher, Oper. Ptnr.
R. Michaux, Oper. Ptnr.

Activity involved more than 11,000 residential units. The company forms multiple partnerships to handle general contracting functions for about 30 residential divisions throughout the U.S.

How much work do the Multifamily Developers do in house?



2

(2)

\$613.14

Cardinal Industries Inc.
2040 S. Hamilton Road
Columbus, OH 43232
Paul Jarvis,
Chief Oper. Officer
Monica Subtirelu,
Dir., Design Services

Buildings for multiple housing, including hotel/motel, retirement and student facilities, were 92 percent of total activity. Recently completed was company's first campus community, a 59-unit development at Georgia Southern University. The firm also is listed in the Hotels/Motels/Restaurants category.

4

(—)

\$272.80

NVRyan L.P.
7601 Lewinsville Road
McLean, VA 22102
C. Langpaul, Pres.,
NVHomes
S. Smith, Pres.,
Ryan Homes

Multifamily housing volume shown accounted for 31 percent of company's activity and the sales of 3,304 single-family attached units in 1987. Single-family detached homes represented the remainder of sales. The company is active in 30 metropolitan areas in 12 states, recently entering California and New Jersey.

5

(3)

\$246.00

Robertson Homes
6653 Embarcadero Drive
Stockton, CA 95209
Chris Schrimpl, Pres
Tom Liv, VP

Multifamily residential buildings, 75 percent of which were built for sale and the remainder for lease, represented firm's entire activity. Current projects include the 600-unit, \$45 million Carmel Mountain in San Diego, the 1,008-unit, \$80 million Hilltop in Richmond, Calif., the 224-unit, \$15 million Cottonwood in Dublin, Calif., and the 736-unit, \$40 million Mission Springs in Ontario, Calif.

3

(9)

\$385.00

Pacific Coast Development Co.
629 Camino de Los Mares
San Clemente, CA 92672
R. Thomas,
Chief Architect

Multifamily residential projects were 65 percent of company's activity, office buildings 22 percent and retail buildings 13 percent. Current projects include a \$26 million, 265-unit condominium project in Eastern Kentucky and an \$85 million single-family/condominium development in Dana Point, Calif.



Cardinal Industries introduced a new contemporary apartment design this year at its Annhurst development in Gahanna, Ohio.

Hovnanian Enterprises builds its first project in New England; A.G. Spanos Construction constructs 3,787 multifamily units

6

(7)

\$203.24

U.S. Home Corp.
1800 West Loop S.
Houston, TX 77252
Robert Strudler, Chmn.
Isaac Heimbinder, Pres.

Volume represents the sale of 2,740 single-family attached homes, comprising about 35 percent of total home sales of 7,797 units. Current projects include Countryside in Naples, Fla., which includes 914 attached units ranging in price from \$69,000 to \$115,000. At Kelly Green in Fort Myers, Fla., 665 attached units are planned. More than 300 attached units were sold in the Washington, D.C., area last year.

How many of the Multifamily Developers use these delivery processes?

 Design/build

 CM

 Fast tracking

 Construction manager

 Design-build

 Neg. contract (const.)

9

(14)

\$134.85

Cenvill Development Corp.
1926 10th Avenue N.
Lake Worth, FL 33461
Richard Siemans, Pres.

Multifamily buildings were 70 percent of company's activity. All units were built for sale. The company, which went public in 1987, is best-known for active adult and country club communities, mostly in Southeast Florida. Current projects include Rainberry Bay, an 833-unit townhome/single family/patio home development in Delray Beach. Century Village in Pembroke Pines is planned as a 7,500-unit active adult condominium development.

7

(4)

\$178.52

Hovnanian Enterprises Inc.
10 Highway 35
Red Bank, NJ 07701
A. Hovnanian, Pres.

Multifamily residential buildings, which were built entirely for sale, represented all but 6 percent of company's activity. Current New Jersey multifamily flats and townhouse projects include Society Hill Kilmer Woods in Mahwah, Governors Pointe in N. Brunswick, Society Hill Somerset III in Franklin Township and Society Hill at University Heights in Newark. Company entered the New England market with its first project in Merrimack, N.H.

8

(5)

\$148.65

A.G. Spanos Construction Inc.
1341 W. Robin Hood Drive
Stockton, CA 95207
Alex G. Spanos, Pres.

Activity consisted entirely of multifamily residential buildings and involved a total of 3,787 units. Current projects include 1,144 units in Nevada, 1,018 in Georgia, 424 in California, 257 in Arizona and 944 in Kansas. Building for sale was 80 percent of activity, for ownership the remaining 20 percent. Less than 50 percent of design, but all of construction, done in-house.

10

(13)

\$129.39

Lieberman Corp.
11970 Borman Drive
St. Louis, MO 63146
Alan Lieberman, Pres.
G. Kerr, VP, Residential

Volume shown does not include single-family detached homes, which were 43 percent of company's activity. Construction was completed on Lakewood Place, a 364-unit development in Tampa. Construction is beginning on two Atlanta projects, Trenton with 400 units and Raintree with 130 units. A January construction start is expected on a 364-unit development in Fort Lauderdale.

11

(15)

\$90.15

Picerne Properties
75 Lambert Lind Highway
Warwick, RI 02886
Ron Picerne, Pres., CEO

Multifamily residential buildings represented 94 percent of company's activity. Nearly all units are built for lease. Current garden apartment projects include 192- and 186-unit developments in Phoenix, 360 units in Orlando, 168 units in Davie, Fla., and 180 units in Deerfield Beach, Fla. The company is active in the Southwest and New England, but did most of its construction in the Southeast in 1987.

12

(18)

\$84.85

Oriole Homes Corp.
1151 N.W. 24th St.
Pompano Beach, FL 33064
George Wiesman, VP, Arch.
C. Feller, VP, Const.

Volume shown excludes the 18 percent of firm's activity represented by single-family detached homes. All units were built for sale. Company is most active in Broward and Palm Beach counties. Current projects include Island Lakes, Country Landing and Whisper Walk in Boca Raton, Westbridge and Woodgate in Sunrise, Cypress Bend in Pompano Beach and Palm Chase Lakes in Boynton Beach.

U.S. Home Corp. is developing Countryside, a golf course community in Naples, Fla., that will include 914 attached homes.



Forest City Residential Development opened a 305-unit apartment for senior citizens in Southfield, Mich.

13

(21)

\$72.15

The Weingarten-Siegel Group
198 Route 9
Manalapan, NJ 07726
Allen Weingarten, Pres.
Ned Siegel, VP

Volume shown does not include the 35 percent of firm's activity that involves single-family detached homes. Current projects include Pointe O' Woods, a Howell, N.J., development that includes 380 garden apartments, 172 townhomes and 172 single-family homes. The company is active in central New Jersey, Florida and California.

16

(23)

\$42.68

Edward Rose Building Enterprise
P.O. Box 937
Southfield, MI 48037
Sheldon Rose, CEO

Company's activity involved 1,850 apartment units in 26 projects located in 10 states. All were low-rise units averaging 820 square feet, and were built primarily for lease. Company was active in Michigan, Illinois, Indiana, Wisconsin, Ohio, Missouri, North Carolina, South Carolina, Tennessee and Virginia. Single-family detached homes were 3 percent of activity.

18

(—)

\$34.44

RecreActions Group
220 Newport Center Drive
Newport Beach, CA 92660
Nelson Chung, VP, Ping.

Volume shown does not include the 18 percent of company's activity that involves single-family detached homes. Company is best-known for high-density residential projects in San Diego and Orange counties of California and in Bernard's Township and Bedminster, N.J. Current projects include Halcyon del Mar, a 184-unit townhome development in San Diego, and Malson de Fleur, a 105-unit duplex apartment project in Fullerton, Calif.

14

(10)

\$52.06

Forest City Residential Development
10800 Brookpark Road
Cleveland, OH 44136
Ron Ratner, Pres.
Glen Moenich, VP-Const.
Ken Yarus, VP,
Arch. and Eng.

Company's activity consisted entirely of multifamily residential buildings and involved 945 units, 75 percent of which were built to own. Current projects include Franklinton, a high-rise market-rate apartment in Philadelphia.

17

(22)

\$37.24

Flournoy Construction Co.
P.O. Box 6566
Columbus, GA 31995
John Flournoy, CEO
Randolph Osborne,
Sr. VP, Const.

Multifamily residential buildings were 90 percent of company's activity, and involved 1,208 units. Current projects include the \$9.8 million, 280-unit phase II of Paddock Park Apartments in Ocala, Fla., and the 348-unit Whisperwood Apartment and Club in Columbus, Ga. Company is best-known for luxury multifamily projects in the Southeast.

19

(—)

\$31.00

Coscan Development Corp.
2 First Canadian Place
Toronto, ON M5X1H9
L.R. Cullingworth, Pres.

Volume shown does not include the 52 percent of company's activity that involves construction of single-family detached homes. The company is a public real estate development firm with U.S. operations in Arizona, California, Florida and suburban Washington, D.C. Projects planned include about 400 units in Broward, Martin and Palm Beach counties of Florida and 600 single-family and multifamily units in the Washington, D.C., area.

15

(—)

\$44.20

Centex Real Estate Corp.
Centex Homes
3333 Lee Parkway
Dallas, TX 75219
Harry Leonhardt, Chmn.
William Gillilan, Pres.

Volume was estimated by BD&C. Multifamily attached homes were approximately 8 percent of total sales volume of \$552.5 million in the fiscal year ending March 31, 1988. All units were built for sale. Multifamily projects are being built in about one-third of the 28 markets where company is currently active. The company is a subsidiary of Centex Corp.

41 % of the Multifamily Developers did all construction in house, but only 10% did all design in house. More than half use competitive bidding for construction and negotiated contracts for design services.

NCHP completes projects in Maryland, Illinois; Glick Co. working in Indiana and Kentucky

SunBrook Apartments, a 477-unit development in St. Charles, Mo., is Empire West Companies' first project outside the Southwest. Photo: Ray Allbright

23

(11)

\$24.50

General Development Corp.
1111 S. Bayshore Drive
Miami, FL 33131
W. McQuillan,
Sr. VP, Housing
A. Walling,
Asst. VP, Proj. Devel.

Volume shown does not include the 65 percent of company's activity that involves single-family detached homes. Current projects include the 36-unit Derby Downs Condominium and the 160-unit Country Club Village Condominium, both in Silver Springs Shores, Fla.

27

(—)

\$13.00

North Cranbrook Associates
26400 Lahser - Suite 104
Southfield, MI 48034
Marvin Rubin, Partner
Emanuel Ravet, Partner

Multifamily residential buildings represented 90 percent of company's activity, and warehouses and office buildings each 5 percent. All projects were built for lease. Current projects include a 130-unit, five-story apartment building in Birmingham, Mich. All construction is done in-house.

20

(20)

\$31.00

Empire West Cos.
5656 E. Grant Road
Tucson, AZ 85712
Cary Marmis, Pres.
Henry Perras, Exec. VP

Multifamily residential buildings represented 95 percent of company's activity, and retail projects the remainder. Projects were built entirely for lease. Projects completed last year include the 477-unit SunBrook Apartments in St. Charles, Mo., the 160-unit SunChase Apartments in Ogden, Utah, and the 398-unit SunPueblo Apartments in Albuquerque.

24

(30)

\$15.80

Crowell Industries
521 N. Mountain Ave.
Upland, CA 91786
Harry Crowell, Pres.

Volume shown does not include the 60 percent of company's activity that involves single-family detached homes. Current apartment projects include 280 units in Fontana, Calif., and 346 units in Rialto, Calif. Office buildings and manufacturing buildings each accounted for 5 percent of company's activity. More than half of its design and construction is done in-house.

28

(29)

\$12.00

Gene B. Glick Co. Inc.
P.O. Box 40177
Indianapolis, IN 46240
Max Thurston, Exec. VP
James Bisesi, VP, Eng. & Const.

Company's activity involved multifamily residential buildings exclusively, and involved 300 units, all constructed for lease. Current projects include the 150-unit Williamsburg on the Lake II in Evansville, Ind., the 164-unit Woodbridge Apartments II in Louisville, Ky., 290 units in Bloomington, Ind., and 300 units in Ft. Wayne, Ind.

21

(—)

\$30.00

New Jersey Housing & Mortgage Finance Agency
3625 Quakerbridge Road
Trenton, NJ 08650
James Logue, Exec. Dir.
R. Lee, Dir., Tech. Svcs.

The agency develops multifamily housing with a portion of the units available for low- and moderate-income families. Recently completed projects include Metropolitan Plaza and Vermont Plaza, both \$15 million developments in Atlantic City that consist of high- and low-rise apartment buildings.

25

(—)

\$14.28

Pacific Scene Inc.
3900 Harney St.
San Diego, CA 92110
Edward Peterson, Exec. VP

Volume shown does not include the 85 percent of company's activity that involves single-family detached homes. Completed Alder Ridge, a 120-unit development in Davis, Calif., and Villa Pacifica of Hillcrest, a 64-unit project for seniors in San Diego. Construction has begun on a 170-unit apartment development for seniors in Rancho Cucamonga, Calif.

29

(27)

\$10.00

FPI Real Estate Group
25 Cadillac Drive
Sacramento, CA 95285
Don Holland, Pres.
Jay Flatt, Exec. VP

Multifamily residential buildings were 45 percent of company's activity, hospitals and health care projects were 55 percent. Completed projects include Hilltop, an 84-unit facility for seniors in Grass Valley, Calif., and Cameron Oaks, a 152-unit development in Cameron Park, Calif. Projects scheduled for completion in 1989 include Rancho del Oro, a 600-unit project for seniors in Fremont, Calif.

22

(8)

\$25.00

NCHP
1225 Eye St. N.W.
Washington, DC 20005
Lisa Kolker Max, Sr. VP,
Joint Venture Devel.

Volume was estimated by BD&C. Multifamily residential buildings were 90 percent of firm's activity, and single-family detached homes the remainder. Projects completed in 1988 include Grosvenor Tower, a 237-unit building in Bethesda, Md., the two-building, 409-unit 200 Arlington Place in Arlington Heights, Ill., and Green Trails, a 440-unit development in Lisle, Ill.

26

(26)

\$13.80

Segal Associates Inc.
560 Benigno Blvd.
Bellmawr, NJ 07719
John E. Segal, VP

Volume shown does not include the 60 percent of company's activity that involves single-family detached homes. Current projects include 165 condominium units in Ventnor City, N.J., and 140 units in Tuckerton, N.J. Company is best-known for residential communities in southern New Jersey. Projects were built primarily for sale.

30

(—)

\$7.50

D & S Co.
11650 Riverside Drive
North Hollywood, CA 91602
Peter Sidlow, Pres.
Guy Tobin, Exec. VP

Volume shown does not include the 85 percent of company's activity that involves single-family detached homes. Company completed the 84-unit Malibu Canyon Village in Calabasas, Calif., and the 33-unit Gayley Apartments in Westwood, Calif. Under construction are 30 units at Springland Village in Sparks, Nevada, bringing the total to 258 of a planned 313 residences.

HOTELS/MOTELS/ RESTAURANTS

HOTEL/MOTEL DEVELOPERS CONTINUE TO DIVERSIFY

The 40 leading lodging and restaurant firms placed \$4.6 billion of construction during 1987

1

(1)

\$897.38

Marriott Corp.
One Marriott Drive
Washington, DC 20058
Jack Graves,
Exec. VP, Arch. & Const.
Bob Dacey, Sr. VP, Design
Jim Greenwald,
Sr. VP, Const.

During 1987 Marriott opened 20 Residence Inn hotels in the U.S. and plans to open an additional 27 in 1988. Two Fairfield Inn hotels, with an average of 135 rooms, opened in 1987, and the firm plans the opening of 18 additional hotels in 1988. Marriott has slated the introduction of three more Suite Hotels, which feature an average of 254 all-suite rooms, for the U.S. in 1988.

4

(—)

\$367.00

Hemmeter Development Corp.
2255 Kuhio Ave.
Honolulu, HI 96815
H. Thomas Robinson,
Pres., COO
Robert K. Umemura,
Pres., COO-Lawton &
Umemura Architects
Christopher B. Hemmeter,
Chmn., CEO-Hemmeter Corp.

Firm is a new addition to the listing this year. Although Hemmeter is primarily involved in the development of destination resorts in the Hawaiian Islands, the firm is expanding to the U.S. mainland, Caribbean, Mexico and the Pacific Basin.

5

(4)

\$355.00

Ramada Inc.
3838 E. Van Buren
Phoenix, AZ 85008
John Kelly,
VP, Design & Const.

Total construction volume includes \$100 million of reconstruction work. Firm does less than 50 percent of its design in house and none of its own construction. Building methods include design/build from an outside firm, competitive bidding for construction and negotiated contracts for both design and construction. Recent projects include a 210-room hotel in Bloomington, Minn., a 300-room hotel in San Diego, and a 180-room hotel in Cypress, Calif. Ramada expects to place \$400 million of construction during 1988.

2

(2)

\$546.86

Holiday Corp.
3645 Lamar Ave.
Memphis, TN 38195
G.D. Livaudais Jr.,
Dir., Const.-Corporate
Jim Howell,
Dir., Const.-Embassy
Blair Wright,
Dir., Const.-Hampton

During 1987, Holiday Corp.'s Hotel Services Division designed and developed the extended-stay concept that was introduced to the public in spring 1988 as the Homewood Suites brand. Current projects include the Broadway Crowne Plaza in New York City, Harrah's Hotel & Casino in Laughlin, Nev., and a six-story Hampton Inn in San Francisco.

3

(3)

\$396.24

McDonald's Corp.
One McDonald's Plaza
Oak Brook, IL 60521
Charles W. Broadbent,
VP, Arch. & Const.

Total construction volume includes \$138 million of reconstruction work. The company opened its 10,000th restaurant in Dale City, Va., in April 1987. A total of 331 new units were built last year. McDonald's does more than 50 percent of its design in house, but none of its own construction. Building methods include competitive bidding and negotiated contract for construction. The company builds and leases 100 percent of the free-standing restaurants it develops. McDonald's expects to put \$420 million of construction in place during 1988.

The above 238-room Holiday Inn hotel opened in Foster City, Calif., in early 1987. Photo: Jeff Hager

Westin acquired by Aoki Corp. of Tokyo; Hyatt develops congregate care facilities

6

(11)

\$199.93

Cardinal Industries Inc.
2040 S. Hamilton Road
Columbus, OH 43232
Paul Jarvis, COO
Monica Subtirelu,
Dir., Design Svcs.

Construction volume listed above is for hotel/motel construction only. Firm is also listed in the Multifamily Developers category. The company opened 40 Arborgate Inns motels during 1988. All design and more than 50 percent of construction is done in house. Building methods include competitive bidding for construction. The firm builds and leases to others 90 percent of the projects it develops, and builds and sells 10 percent.



Cardinal Industries opened this 67-room Arborgate Inns motel in Lake Wales, Fla., in July 1988. Forty Arborgate Inns were completed during 1988.

7

(6)

\$160.00

Burger King Corp.
P.O. Box 520783
Miami, FL 33152
Paul R. Gershen,
VP, Arch. & Const.

During the past year, Burger King built 376 new restaurants in the U.S. and 88 new units overseas. An emphasis has been placed on reducing the costs of new restaurants and the upgrading of existing units. More than 50 percent of design is done in house, while no construction is performed in house. Building methods include competitive bidding for construction. Burger King builds, owns and occupies 10 percent of the restaurants it develops. Parent firm is Pillsbury Co. of Minneapolis.

10

(25)

\$130.00

Hardee's Food Systems
1233 N. Church St.
Rocky Mount, NC 27802
Gerry McGinnis,
Exec. VP, Devel.
James Moore,
VP, Design & Const.
Bert House,
Corp. Dir., Const.

Total construction volume includes \$40 million of reconstruction work and includes work done by franchisees. A total of 250 new units were constructed during 1987 and 120 restaurants were renovated. All design and construction management is performed in house. Building methods include competitive bidding for construction.

13

(9)

\$90.00

Westin Hotels & Resorts
The Westin Building
2001 Sixth Ave.
Seattle, WA 98121
Dan McClaskey, Exec. VP
Steven Schnoor,
Dir., Design & Const.

Westin was recently acquired by Aoki Corp. of Tokyo. Total construction volume includes \$22 million of reconstruction work. No design or construction is done in house. Building methods include competitive bidding for construction and negotiated contract for design. Recent projects include the Disney Swan Hotel at Disney World in Florida, Westin hotels in Indianapolis and Vail, Colo., and the 800-room renovation of the Plaza Hotel in New York City.

8

(—)

\$150.00

Pratt Hotel Corp.
13455 Noel Road
Dallas, TX 75240
Edward Pratt III,
Exec. VP
Tony Testa, VP
David Cramner, VP

Firm is a new addition to the listing this year. Pratt is best-known for its development of hotels and casinos. Recent projects include Maxims Hotel in New York City and the Sands Hotel & Casino in San Juan, Puerto Rico. No design or construction is performed in house. Building methods include design/build and construction management from outside firms, and negotiated contracts for both design and construction.

11

(8)

\$123.96

Hilton Hotels Corp.
9336 Civic Center Drive
Beverly Hills, CA 90209
Gregory R. Dillon,
Exec. VP, Corp. Prop.
James L. Philon,
Sr. VP, RE & Devel.

Hilton primarily develops hotels and resorts in the U.S., but a new division called Conrad International is currently spearheading development in Europe and Asia. More than 50 percent of design is done in house, while less than 50 percent of construction is done in house. Building methods include design/build and construction management from outside firms and negotiated contract for both design and construction.

14

(13)

\$85.00

Doubletree/Compri Hotels
420 N. 44th St.
Phoenix, AZ 85008
Don Hart, VP, Const.

Construction volume estimated by BD&C. No design or construction is performed in house. Building methods include design/build and construction management from outside firms, fast-track scheduling, competitive bidding for construction and negotiated contract for both design and construction. Firm primarily develops hotels in the West, East and North. Compri Hotel projects were recently completed in Atlanta, Gaithersburg, Md., Minneapolis, Harrisburg, Penn., and El Segundo, Calif. An \$18 million Doubletree Hotel opened in Dallas.

9

(7)

\$140.00

Sheraton Corp.
60 State St.
Boston, MA 02109
Michael Loughran,
Dir., Design

Construction volume is estimated by BD&C and excludes work done by franchisees. The firm's all-suite hotel concept, "Sheraton Suites," debuted in 1987. Less than 50 percent of its design and none of Sheraton's construction work is done in house. Building methods include design/build and construction management from outside firms, competitive bidding for construction and negotiated contract for both design and construction. Sheraton is a subsidiary of publicly traded ITT of New York City.

12

(5)

\$100.00

PepsiCo
Anderson Hill Road
Purchase, NY 10577
D. Wayne Calloway,
Chmn., CEO

Construction volume estimated by BD&C. The construction volume listed above is for PepsiCo's restaurant division only, which is made up of Kentucky Fried Chicken (KFC), Pizza Hut and Taco Bell units. KFC is currently refurbishing existing restaurants and adding drive-thru windows. Pizza Hut added approximately 100 units acquired from another restaurant system and converted them to Pizza Hut restaurants. Taco Bell is currently the leading fast-food Mexican restaurant chain in the U.S.

15

(14)

\$81.77

Interstate Hotels Corp.
680 Anderson Drive
Pittsburgh, PA 15220
John R. Hardy,
VP, Arch. & Const.

Total construction volume includes \$9.6 million of reconstruction work. No design or construction is done in house. Building methods include fast-track scheduling, competitive bidding for construction and negotiated contract for both design and construction. Recent projects include new Marriott hotels in Memphis, Pittsburgh, Minneapolis, San Diego and Colorado Springs, Colo. Interstate recently renovated Marriott hotels in Harrisburg, Penn., Miami, Worcester, Mass., Chattanooga, Tenn., and Key West, Fla.

How many of the Hotels/Motels/Restaurants use these delivery processes?

Design/build
CM
Fast tracking
Neg. contract (design)
Neg. contract (const.)

19

(29)

\$50.00

Pickett Companies
655 Metro Place North
Dublin, OH 43017
James Pickett, Chmn.
Ronald C. Callentine,
Pres.

This privately owned firm does less than 50 percent of its design in house and none of its construction in house. Building methods include negotiated contract for construction. Pickett is recognized for its development of suite hotels primarily located in the eastern part of the U.S. Pickett Suite Inns recently opened in Indianapolis, Dayton, Ohio, Nashville, and Orlando, Fla.

22

(17)

\$40.00

Ritz Carlton Hotel Co.
3414 Peachtree Road, N.E.
Atlanta, GA 30326
Doug McGarrity, Exec. VP
Tim Richardson,
Sr. VP, Devel.
Larry Kessinger,
Sr. VP, Design & Const.

Total construction volume includes \$10 million of reconstruction work. This privately owned firm does less than 50 percent of both its design and construction in house. Building methods include negotiated contracts for design and construction. Ritz Carlton expects to place \$65 million of construction and reconstruction during 1988.

16

(12)

\$76.00

Hyatt Development Corp.
200 W. Madison St.
Chicago, IL 60606
Michael J. Dickens,
Sr. VP, Plng. & Const.
John P. Tynan, VP

Hyatt plans to continue its expansion into suburban and secondary cities via its prototype hotel program. Due to the overbuilt state of the lodging market, Hyatt has expanded through the acquisition of existing hotels. The firm recently formed a new division called "Classic Residence by Hyatt" which will develop and operate congruence care facilities throughout the U.S. Two projects were started during 1988 in Teaneck, N.J., and Chevy Chase, Md. No design or construction is done in house.

20

(—)

\$41.60

Super 8 Motels Inc.
1910 Eighth Ave., N.E.
Aberdeen, SD 57401
Steven L. Warren, Pres.
Keith Peterson, VP, Mktg.
Anton Eder,
VP, Arch. Svcs.

Firm is a new addition to the listing this year. Super 8 is known for its motel developments primarily within the U.S., but the firm expects to do some building in Canada during 1989. All construction is performed in house by Super 8 Builders Inc. Less than 50 percent of design is done in house. Super 8 motels were completed during 1988 in Chesapeake, Va., College Park, Md., Tallahassee, Fla., and Austintown, Ohio.

23

(19)

\$37.80

La Quinta Motor Inns Inc.
P.O. Box 790783
San Antonio, TX 78279
Charles A. Gange,
VP, Design & Const.

Total construction volume includes \$13.8 million of reconstruction work. La Quinta performs more than 50 percent of its design in house, but does none of its own construction. Building methods include competitive bidding for construction. La Quinta primarily develops motels in the Sunbelt. Recent La Quinta motor inns were opened in Hoffman Estates and Arlington Heights, Ill., and a 66-room addition was added to a motel in San Antonio. La Quinta expects to place \$43 million of construction and reconstruction during 1988.

17

(35)

\$80.00

The Riese Organization
182 W. 34th St.
New York, NY 10001
Irving Riese, Pres.
Murray Riese, Treasurer

More than 50 percent of the firm's design and construction is done in house. Building methods include fast-track scheduling, competitive bidding for construction and negotiated contract for design. Riese is a diverse restaurant franchisee that develops Houlihan's, T.G.I. Friday's and Pizza Hut units. Firm recently began its expansion into the New Jersey and Connecticut markets. Riese builds, owns and occupies 90 percent of the units it develops and builds and leases 10 percent to others.

21

(33)

\$41.40

Host International Inc.
3402 Pico Blvd.
Santa Monica, CA 90406
Charles W. Sampson,
VP, Design & Const.
James J. Hill,
Dir., Design & Const. Svcs.
William A. Andersen,
Dir., Const.-East Coast
Ronald L. Kelley,
Dir., Const.-West Coast

Host operates food, beverage and retail units in approximately 50 airports nationally. No design or construction is performed in house. Building methods include construction management from an outside firm and negotiated contract for both design and construction.

24

(16)

\$35.50

Red Roof Inns Inc.
4355 Davidson Road
Hilliard, OH 43026
Draw Berlin, VP

Red Roof Inns is known for its development of motels east of the Mississippi River. This privately owned firm does all of its construction in house, but less than 50 percent of its design in house. Building methods include negotiated contract for construction. Red Roof Inns builds, owns and occupies 100 percent of the motels it develops. Major projects that were completed during 1987 include a 112-unit motel in Chattanooga, Tenn., a 120-unit Red Roof Inn in Durham, N.C., and a \$2 million motel in Philly Oxford Valley, Penn.

18

(18)

\$50.00

General Mills Restaurants Inc.
6770 Lake Ellenor Drive
Orlando, FL 32859
Joe R. Lee,
Pres.-Red Lobster USA
Jeffrey J. O'Hara,
Pres.-Olive Garden
Charles Benton III,
Pres.-York

Construction volume estimated by BD&C. General Mills' restaurant division includes Red Lobster, Olive Garden and York units. General Mills divested its Leeann Chin's Chinese restaurants in the third quarter of 1988. Red Lobster plans to open 20 new units in 1988; Olive Garden will add 40 units.

The slanted red roofs of Red Roof Inns' motels are a distinctive trademark that travelers throughout 30 states have come to recognize.



San Jacinto Savings & Loan acquires Mariner; A & W opens first drive-thru-only restaurant

25

(27)

\$35.00

Intergroup Development
1400 Post Oak Blvd.
Houston, TX 77056
Matthew Dilick, Proj. Mgr.

This privately owned firm does no design or construction in house. Building methods include negotiated contract for both design and construction. Recent projects include the 44,000-sq.-ft. Parkway Pavilion restaurant and retail center, and the Ramada Resort at the Parkway, a 592-unit tourist resort located next to Walt Disney World, both in Florida. Intergroup has placed a new market emphasis on property management and consulting activities. Although the firm is primarily known for its projects in Florida and Texas, Intergroup is expanding to the West Coast.



Chili's, which ranks number 29 in the listing this year, has introduced a new Chili's Grill and Bar building prototype. Photo: Edward M. Palms

26

(23)

\$34.00

UsaCafes L.P.
8080 N. Central Hwy.
Dallas, TX 75206
Charles B. Brewer, Sr. VP
Perry J. Brush,
Dir., Const.

UsaCafes owns and franchises Bonanza family restaurants that range in size from 6,500 square feet to 8,000 square feet. Although the firm has mostly concentrated its restaurant construction in the North, Central and Eastern U.S., it is planning to expand to the West Coast. In addition, UsaCafes has initiated a development program for the United Kingdom. The firm performs more than 50 percent of its design work in house, but does less than 50 percent of its own construction.

28

(28)

\$30.00

Motel 6 L.P.
14651 Dallas Pkwy.
Dallas, TX 75240
Hugh Thrasher,
Exec. VP, Mktg. & Devel.
Austin Kerin, Dir., Const.
Henry Sossin,
Dir., Arch. & Eng.

Motel 6 develops motels nationwide, but is planning an expansion in the Northeast and Midwest. More than 50 percent of its design, but none of its construction is done in house. Building methods include competitive bidding for construction. Projects completed during 1987 include a 107-unit motel in Fresno, Calif., a 123-unit Motel 6 in Sharonville, Ohio, and a 126-unit motel in Pittsburgh.

30

(30)

\$25.00

S & A Restaurant Corp.
12404 Park Central Drive
Dallas, TX 75251
Roy Study, VP, Devel.

Firm is a subsidiary of Pillsbury Co. of Minneapolis. Restaurants include Steak & Ale, Bennigan's, Bay Street and Key West. S & A has recently cut back the development of new restaurant concepts and the number of new units being developed. Last year, the firm developed 15 units with an average size of 7,200 square feet nationwide. Primary development areas include California, Chicago, the Mid-Atlantic, Northeast and Southeast. S & A does more than 50 percent of its design and construction in house. S & A Construction Corp. is construction subsidiary.

27

(—)

\$30.00

Mariner Hotel Corp.
15770 Dallas Pkwy.
Dallas, TX 75248
Steve Crowder,
VP, Const.

Firm is a new addition to the listing this year. Mariner was acquired by San Jacinto Savings & Loan of Houston in March 1988 and the name of the firm was changed from Mariner Corp. to Mariner Hotel Corp. The firm is known for its development of hotels in the Southeast, Southwest and Northwest. No design or construction is performed in house. Building methods include fast-track scheduling and both competitive bidding and negotiated contract for construction. Mariner recently opened Hampton Inn hotels in Seattle and Phoenix.

29

(36)

\$27.00

Chili's Inc.
6820 LBJ Freeway
Dallas, TX 75240
Edward M. Palms, Sr. VP

This publicly traded firm develops restaurants in 26 states, although California, Florida and the Midwest have been particularly active growth areas. Chili's has recently been busy converting various buildings to accommodate its prototype store. The firm performs all of its design, but less than 50 percent of its construction, in house. Building methods include competitive bidding for construction. Chili's experienced a 23 percent growth in both its revenues and the number of restaurants it developed last year.

31

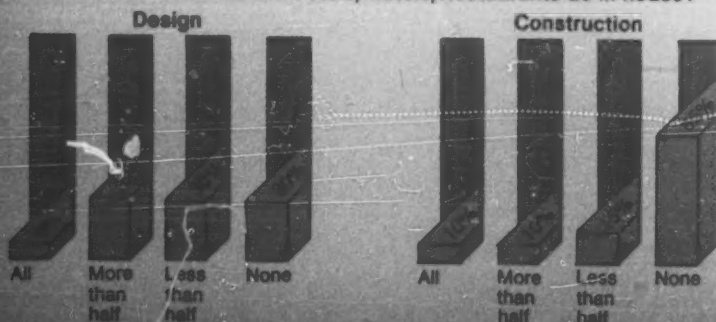
(10)

\$24.44

Golden Nugget Inc.
4315 S. Industrial Road
Las Vegas, NV 89103
Kenneth R. Wynn, Pres.
Peter T. Smith, Exec. VP
Joel D. Bergman,
VP, Design & Devel.

Golden Nugget does less than 50 percent of its design, and none of its construction, in house. Atlantia Design, the firm's construction management and contract furnishings subsidiary, is based in Las Vegas. During 1987 the firm moved its East Coast operations to the Las Vegas area to manage hotel/casino construction and remodeling projects. Current projects include the \$382 million Golden Nugget Strip Hotel/Casino.

How much work do the Hotels/Motels/Restaurants do in house?



32

(20)

\$20.00

Caesars World Inc.
1801 Century Park East
Los Angeles, CA 90067
Roger Lee,
Sr. VP, Finance & Admin.
Joseph LaGumina,
VP, Const.

Caesars World performs no design and less than 50 percent of its construction in house. Building methods include design/build and construction management from outside firms, negotiated contract for design and both competitive bidding and negotiated contract for construction. In September 1987 work began on the design of a substantial addition to the Olympic Casino at Caesars Palace in Las Vegas. The addition is scheduled to open in early 1989.

33

(—)

\$20.00

Golden Corral Development Corp.
5157 Glenwood Ave.
Raleigh, NC 27612
Joseph W. Fink,
VP, Const.

Firm is a new addition to the listing this year. Golden Corral develops its restaurants of the same name throughout the continental U.S. Total construction volume includes \$5 million of reconstruction work. All construction and more than 50 percent of its design are performed in house. Golden Corral builds, owns and occupies 10 percent of the space it develops and leases 90 percent of its space in buildings built to its specifications.

Hotel/Motel developers have experienced success in opposing markets that range from luxurious all-suite hotels, such as Marriott Suites, at one end of the hospitality segment, to bare-bones, budget motels such as Motel 6 at the other.

34

(37)

\$20.00

Jerrico Inc.
P.O. Box 11988
Lexington, KY 40579
Glenn L. Dussingor,
VP, Design & Const.

Jerrico is an owner and developer of Long John Silver's restaurants. Total construction volume includes \$5 million of reconstruction work. More than 50 percent of its design, but no construction, is performed in house. Building methods include competitive bidding for construction and negotiated contract for both design and construction. Jerrico builds, owns and occupies 100 percent of the space it develops. Next year the firm expects to put \$21 million of construction and reconstruction in place.

36

(22)

\$18.00

Days Inns of America Inc.
2751 Buford Highway
Atlanta, GA 30324
Mike Leven, Pres.
Don C. Mathis,
Dir., Plng. & Design

This former publicly traded firm became privately owned in 1987. Parent company is Reliance of New York City. Days Inns is best known for its development of budget hotels and motels throughout the U.S. A \$4.5 million Days Inn opened in Clearwater, Fla., in September 1987. No design or construction is done in house. Building methods include negotiated contract for both design and construction. Days Inns plans to put \$18 million of construction in place during 1988.

38

(21)

\$17.75

A.C.E. Companies
8300 Dunwoody Place
Atlanta, GA 30350
Richard Elias, Pres.
Robert Naderhoff,
VP, Oper.

A.C.E. Companies builds Arby's restaurants throughout the continental U.S. Total construction volume includes \$2.7 million of reconstruction work. No construction and less than 50 percent of its design are done in house. Building methods include competitive bidding for construction. Last year, 65 Arby's units were built. The firm expects to put in place \$3.5 million of reconstruction and \$20 million of new construction during 1988.

35

(24)

\$18.50

AIRCOA Hospitality Services
4600 S. Ulster St.
Denver, CO 80237
Pete Jensen,
VP, Technical Svcs.

Total construction volume includes \$11.5 million of reconstruction work. This U.S. hotel developer recently began projects in Mexico. No construction and less than 50 percent of design is done in house. Building methods include design/build and construction management from outside firms, competitive bidding for construction and negotiated contract for both design and construction. Recent projects include the 500-room renovation of a Clarion Hotel in Cincinnati.

37

(34)

\$18.00

Days of the West Inc.
11020 Whiterock Road
Rancho Cordova, CA 95670
Arthur Hansen, Exec. VP

This privately owned firm is a Days Inns hotel franchisee that is best-known for its hotel and motel developments located throughout California. No design or construction is performed in house. Building methods include construction management from an outside firm and negotiated contract for construction. Recent projects include a 152-room hotel in Palmdale and a 153-room hotel in Richmond, Calif., and a 150-room hotel in Portland, Oregon. Days expects to put \$22 million of construction and reconstruction in place during 1988.

39

(39)

\$13.00

Bob Evans Farms Inc.
3776 S. High St.
Columbus, OH 43207
Larry Corbin, Exec. VP
Joe Griesenbrock, Sr. VP

Bob Evans is best known for its red-and-white, family-style restaurants located in the Midwest, South and Texas. Among the 26 new restaurants opened during the firm's fiscal year ended April 29, 1988, was the company's first Owens Family Restaurant in Irving, Texas. Twenty-three new restaurants are scheduled for opening in fiscal 1989, three of which may open under the Owens name in the Dallas/Fort Worth area. No design or construction is done in house. Building methods include competitive bidding for construction.

Jerrico's new Long John Silver's restaurants have drive-thru windows, larger kitchens and brighter sunlit dining areas.

40

(40)

\$10.05

A & W Restaurants Inc.
17197 N. Laurel Park Drive
Livonia, MI 48152
Michael Smith,
VP, Const. & Devel.

Total construction volume includes \$4.8 million of reconstruction work. Although most restaurants are located in Michigan, Wisconsin and Minnesota, A & W is expanding into Florida, California, Pennsylvania, New York and Nevada. In August 1988 A & W opened its first drive-thru-only restaurant in Flint, Mich. A & W restaurants were also opened in Holt, Mich., Springfield, Mass., and Ventura, Calif. More than 50 percent of design, but no construction, is done in house. Building methods include competitive bidding for construction.



GOVERNMENT AGENCIES

CONSTRUCTION RISES 8% FOR 1987/88 FISCAL YEAR
A further 2% increase is projected for the current fiscal year

1

(2)

\$1,818.91

U.S. Department of Energy
1000 Independence Ave.,
S.W.
Washington, DC 20585
Robert R. Kemps,
Dir., Proj. & Fac. Mgmt.

Approximately 50 percent of the Department of Energy's building construction involves labs and other research facilities. The agency also develops buildings for nuclear- and defense-related programs. No design or construction done in house. Construction volume reported above is for the fiscal year ended September 1988. Construction volume during the current fiscal year is expected to increase by about 15 percent to \$2.1 billion.

4

(4)

\$1,440.00

U.S. Air Force
HQ USAF/LEECD
Washington, DC 20330
Maj. Gen. George Ellis,
Dir., Eng. & Svcs.
Col. Dabney S. Craddock,
Chief, Const. Div.

Building design and construction for the Air Force is administered by the Army Corps of Engineers and the Naval Facilities Engineering Command. Total estimated construction cost of projects under construction is \$6.6 billion, of which \$1.6 billion represents projects overseas. Only competitive bidding is used for construction; no construction done in house. Recent projects include a \$205 million hospital at Travis AFB in California.

6

(5)

\$894.00

U.S. Postal Service
475 L'Enfant Plaza
Washington, DC 20260
Stanley W. Smith,
Asst. Postmaster General
John N. Wiernicki,
Dir., Design & Const.

The Postal Service is currently implementing diversified contracting methods and new procurement policies stressing competitive negotiations. It is also expanding its use of standard plans for smaller postal facilities. Construction volume reported above represents the fiscal year that ended in September 1987. Deferred projects will result in a decline to \$355 million during fiscal year 1988.

2

(3)

\$1,808.00

U.S. Army Corps of Engineers
Resource Management
Office (CERM-FC)
Washington, DC 20314
Richard Hanson,
Chief, Const. Div.

All construction is done at military installations. The construction volume reported above does not include \$637 million of construction put in place at overseas installations. For the 1989 fiscal year the construction volume is expected to decrease by about 30 percent to \$1.25 billion. Less than 50 percent of design done in house; no construction done in house.

5

(6)

\$963.79

Ohio Division of Public Works
30 E. Broad St., 35th Fl.
Columbus, OH 43215
Carole J. Olshavsky,
State Architect

Educational facilities accounted for the largest share of building construction at 40 percent, followed by prisons (20 percent), health care (10 percent) and labs/research facilities (7 percent). Projects scheduled for completion in 1988 include correctional centers in Warren and Lorain, and an indoor football field for Ohio State University in Columbus. Construction volume for the fiscal year ending in June 1989 is expected to decline by 23 percent to \$741 million.

7

(7)

\$515.51

U.S. Veterans Administration
810 Vermont Ave., N.W.
Washington, DC 20420
Susan Livingstone,
Assoc. Dep. Administrator
Gerald E. Neumann,
Dir., Office of Fac.

During the past year the Veterans Administration has consolidated its construction activity under one office. Less than 50 percent of design is done in house; no construction is done in house. Current projects include replacement medical centers in Bay Pines, Fla., Richmond, Va., and Martinsburg, W. Va.; and modernization of medical centers in Denver and Biloxi, Miss.

3

(1)

\$1,566.00

U.S. Naval Facilities Engineering Command
200 Stoval St.
Alexandria, VA 22332
Rear Adm. B.F. Montoya,
Commander

Building construction done by the Naval Facilities Engineering Command included multifamily residential (18 percent), health care (12 percent), labs and research facilities (10 percent), offices (10 percent) and educational facilities (12 percent). Construction volume for the current fiscal year is expected to fall to \$1.6 billion. Less than 50 percent of design done in house; no construction done in house.



The U.S. Postal Service recently completed this mail facility in San Bernardino, Calif. A total of 36 new projects were under way during the 1988 fiscal year.

New York Dormitory Authority expands into judicial facilities; GSA puts emphasis on increasing federal ownership of facilities.



An atrium serves as a link to a \$45 million addition completed by the New York State Dormitory Authority at the New York City Technical College.

Photo courtesy of Edward Durell Stone Associates P.C.

8
(8)
\$439.00

New York State Dormitory Authority
161 Delaware Ave.
Delmar, NY 12054-1398
Christopher H. Richmond,
Exec. Dir.
Peter J. Schultz,
Dep. Exec. Dir., Const.

Although known primarily for facilities for higher education, the Dormitory Authority also builds health care facilities and has expanded into judicial facilities during the past year. No design or construction done in house. Construction for the current fiscal year ending in March 1989 is expected to remain level with the construction volume reported above for fiscal 1988.

10
(13)
\$327.67

U.S. Marine Corps, Fac. & Svcs. Div. Marine Corps (GH) HQ, Code L Washington, DC 20380
General Michael Downs,
Dir., Fac. & Svcs.

Less than 50 percent of design and construction done in house. Emphasis is on housing and hangar modernization, particularly at sites on the West Coast. Construction for the Marine Corps is administered by the Naval Facilities Engineering Command.

13
(15)
\$250.00

Florida Department of General Services 512 Larson Building Tallahassee, FL 32301
Robert Boerema, Dir.
William Scaringe, Asst. Dir.

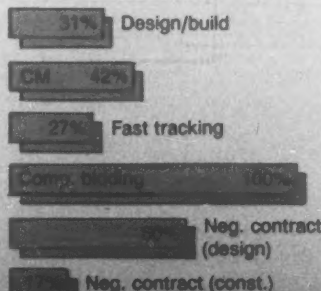
The Department of General Services' Division of Building Construction is involved primarily in office construction. Projects under way include state office facilities in Tallahassee, Orlando, Daytona Beach and Miami. Construction volume for the current fiscal year ending in June 1989 is expected to increase to \$276 million. No design or construction done in house.

9
(39)
\$360.00

N.Y.C. Department of General Services 1 Centre St., 15th Fl. So. New York, NY 10007
Benedetto Puccio, Dir.,
Bureau of Bldg. Design

The largest share of building construction involved justice and correctional facilities and police stations. Some design but no construction in house. Only competitive bidding is used for construction.

How many of the Government Agencies use these delivery processes?



14
(22)
\$250.00

Louisiana Dept. of Fac. Planning & Control P.O. Box 94095 Baton Rouge, LA 70804
James R. Hill,
Chief Architect
Julius Birch,
Chief Engineer

The breakdown of building construction involved offices (40 percent), educational facilities (30 percent), correctional facilities (20 percent) and research facilities (10 percent). No design or construction done in house. Construction spending for 1988 is expected to decline to \$175 million.

*This year the
Government Agencies
reported that 42 % had
used construction
management, an
increase of 8 %.*

15

(11)

\$237.50

**New York State Office
of General Services
Tower Bldg., 35th Fl.
Empire State Plaza
Albany, NY 12242**
Raymond Casey, Exec. Dir.
Bernard Price, Asst. Dir.

The Office of General Services' Design & Construction Group is primarily known for construction of correctional facilities and rehabilitation of state-owned buildings. Construction volume for the current fiscal year ending in April 1989 is estimated at \$350 million. More than 50 percent of design is done in house. Scheduled for completion during 1988 are correctional facilities in Cape Vincent, Ogdensburg, Moravia, Malone and Marcy.

16

(14)

\$232.83

**Alabama State Building
Commission
800 S. McDonough St.
Montgomery, AL 36130**
Robert B. Crumpton, Dir.

Construction volume reported above includes \$58 million of reconstruction. Educational facilities accounted for 60 percent of the Building Commission's work, followed by offices (25 percent) and correctional facilities (15 percent). No design or construction done in house. Projects under way include new high schools in Evergreen, Wetumpka, Jefferson County and Wilcox County, and a \$39 million state office building in Montgomery.

17

(18)

\$231.00

**U.S. Public Health Service
5600 Fishers Lane
Rm. 17A-12
Rockville, MD 20857**
Kathleen Furey Martin,
Dir., Div. Health Fac. Ping.
Luther H. Flouton,
Chief, Ping. & Review

Health care facilities accounted for 55 percent of this federal agency's construction, while labs and research facilities accounted for another 40 percent. In the works are labs for the Food and Drug Administration in Beltsville, Md., and a renovation of St. Elizabeth Hospital in Washington, D.C. No design or construction done in house.

18

(26)

\$200.00

**Michigan Office of
Facilities
P.O. 30026, 131 Mason
Bldg.
Lansing, MI 48909**
Larry Bennett, Acting Dir.
Ed Markwart, Dir., Design
Gary Davenport, Dir., Const.

Less than 50 percent of design done in house; no construction done in house. This state agency's building construction involved correctional facilities (75 percent), educational facilities (20 percent), offices and warehouses (5 percent). Construction volume for 1988 is expected to remain level with volume reported above for 1987. During the past year the agency initiated use of construction management.

19

(20)

\$190.93

**Connecticut Department of
Public Works
165 Capital Ave.
Hartford, CT 06115**
Russell Doeg,
Dir., Design & Const.
Morgan Ely, Chief,
Design & Review

Various educational facilities and university dormitories accounted for 50 percent of construction; prisons accounted for another 30 percent. This department currently has \$100 million of prison construction in design. No design or construction done in house. Construction volume for the current fiscal year ending in June 1989 is expected to increase by about 5 percent.

20

(9)

\$182.95

**North Carolina State
Construction Office
309 N. Salisbury
Raleigh, NC 27603-1360**
John H. Emerson, Dir.
David Bullock, Chief,
Design Review

Emphasis is on facilities for higher education. Less than 50 percent of design done in house; no construction done in house. Construction volume is expected to increase by roughly 37 percent to \$250 million for the current fiscal year.

21

(16)

\$176.50

**South Carolina Division
of General Services
1201 Main St., #430
Columbia, SC 29201**
William Clement, Asst. Dir.
Cecil Mills, Mgr., Const.
Jay Flanagan, State Eng.

Among this state agency's current projects are medium-security prisons in Allendale and Marlboro, and higher education facilities in Clemson and Orangeburg. Construction for the fiscal year ending in June 1989 is estimated at \$122 million, a decline of about 30 percent. Reconstruction accounted for approximately \$50 million of the construction volume reported above for the 1988 fiscal year.

22

(19)

\$166.08

**Illinois Capital
Development Board
300 Stratton Building
Springfield, IL 62706**
Gary Skoien, Exec. Dir.
Edward Smith, Dir., Const.
Theron Aslaksen, Dir.,
Program & Admin.

Some design but no construction done in house. Among projects under construction are 750-man prisons in Canton and Mt. Sterling, and rehabilitation of a 16-story state office building in Chicago. The estimated construction cost of all projects under way is \$906 million.

23

(22)

\$165.00

**Texas Department of
Corrections
P.O. Box 99 NC
Huntsville, TX 77340**
Robert E. Petty IV,
Asst. Dir., Const.

Less than 50 percent of design and construction done in house. Design/build and construction management are used in addition to competitive bidding for construction and negotiated contracts for design. For the current fiscal year construction expenditures are expected to increase by approximately 70 percent to \$285 million. Projects scheduled for completion in 1989 include a 2,250-bed prison in Gatesville, and 1,000-bed facilities in Woodville, Snyder, Dayton and Marlin.

24

(28)

\$162.00

**Los Angeles Department
of Public Works
City Hall East
200 N. Main St.
Los Angeles, CA 90012**
P.J. McCarty, Prin. Arch.
W. Hansen, Prin. Civil Eng.

Less than 50 percent of design and construction done in house. Construction management as well as competitive bidding are used. This department is responsible for fire stations, libraries, police stations and other municipal buildings. Under way is a new \$40 million police academy facility in Los Angeles.

*The Cape Vincent correctional facility,
a project of the New York State Office
of General Services, was built in 11
months.*

St. Paul Port Authority develops through public-private partnerships; construction by Federal Bureau of Prisons jumps sharply



The St. Paul Port Authority has announced the development of the Westgate Office-Industrial Center, a public-private venture expected to employ up to 2,000.

25
(17)

\$151.50

Massachusetts Division of Capital Planning and Operations
One Ashburton Place
15th Fl.
Boston, MA 02108
John I. Carlson,
Dep. Commissioner

Roughly one-half or \$82 million of this agency's construction in 1988 involved correctional facilities; the remainder includes public health and mental health facilities, courthouses, offices and law enforcement facilities. In addition to competitive bidding, this state agency makes use of construction management and design/build.

27
(23)

\$142.50

U.S. Department of Transportation
400 7th St., S.W.
Washington, DC 20590
Angelo Picillo, Dep. Dir.,
Admin. Svcs. & Prop. Mgmt.

This federal agency is involved primarily in the construction of facilities for the Coast Guard and the Federal Aviation Administration, including Coast Guard stations, communications and navigational facilities, air traffic control centers and industrial support facilities. Less than 50 percent of design and no construction done in house.

29
(21)

\$133.00

NASA
Code NXF
Washington, DC 20546
Norman Willis,
Const. Program Mgr.

All construction takes place at ten major NASA installations throughout the country. Ground was broken this year for an \$18 million, 300,000-sq.-ft. office building at the Kennedy Space Center in Florida. Some design but no construction done in house. Negotiated contracts for design and construction, competitive bidding, design/build and construction management are used.

30
(27)

\$128.65

Maryland Department of General Services
301 W. Preston St.
Baltimore, MD 21201
Earl Sebeda, Secretary
Eric Walbeck, Asst. Sec.
Francis Kuchta, Dir.,
Eng. & Const.

The Department of General Services is responsible for the construction of all state-owned facilities excluding transportation projects throughout Maryland. In addition to competitive bidding and fast-track scheduling, construction management and design/build are used. Less than 50 percent of design and no construction done in house.

26
(34)

\$145.66

St. Paul Port Authority
1900 Amhoist Tower
345 St. Peter St.
St. Paul, MN 55102
Eugene A. Kraut, Exec. VP
Lawrence Langer, Chief
Eng.

This government agency is primarily involved in the construction of industrial parks through public-private partnerships. All space is leased to others. Competitive bidding as well as design/build are used. No design or construction done in house. Among projects scheduled for completion in 1988 are a \$16 million Radisson Hotel and the Space Center, a \$25 million conversion of warehouses to offices.

28
(24)

\$134.88

Hawaii Dept. of Accounting & General Services
P.O. Box 119
Honolulu, HI 96810
Russel S. Nagata, Dir.
Teuane N. Tominaga,
State Public Works Eng.

Less than 50 percent of design and construction done in house. Construction expenditures for the current fiscal year ending in June 1989 are expected to increase by approximately 28 percent. Educational facilities accounted for the largest share of work at 43 percent followed by correctional facilities at 37 percent.

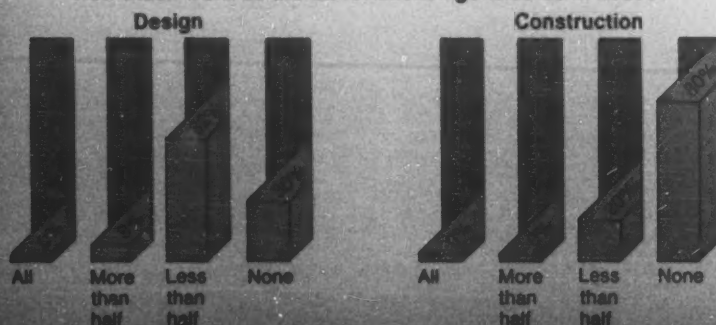
31
(30)

\$110.40

Pennsylvania Department of General Services
18th & Herr Streets
Harrisburg, PA 17120
H.P. Anderson, Dep. Sec.
Emery Thurston, Dir.,
Eng. & Arch.
Roy Walker, Dir., Const.

More than 50 percent of design done in house but no construction. Construction management as well as competitive bidding are used by this department. Construction spending for the fiscal year ending in June 1989 is expected to remain level with that for 1988.

How much work do the Government Agencies do in house?



32
(35)

\$102.90

Los Angeles Department of Airports
1 World Way
Los Angeles, CA 90009
William Schoenfeld,
Dep. Exec. Dir.
Mal Packer, Chief Eng.

In addition to projects at the Los Angeles International Airport, this department is responsible for airport-related projects in Van Nuys, Palmdale and Ontario, Calif. Less than 50 percent of design and construction done in house. Negotiated contracts for design, competitive bidding for construction, construction management and design/build are used. Reconstruction of three terminals at Los Angeles International is currently under way.



The Pennsylvania Department of General Services has administered the addition of new offices and a plaza to the Capitol Complex in Harrisburg.

33

(33)

\$100.00

Washington State Bureau of Public Works
206 General Admin. Bldg.
Olympia, WA 98504
Jack Brown, Asst. Dir.
Maris Grobins, Mgr.,
Arch. Div.
Keith Johnson, Mgr.,
Eng. Div.

No design or construction done in house. Schools and educational facilities accounted for 60 percent of construction, followed by offices (15 percent), health care (10 percent) and correctional facilities (10 percent).

34

(43)

\$98.00

Federal Bureau of Prisons
320 First St., N.W.
Washington, DC 20534
Scott Higgins, Chief,
Fac. Devel.
Buddy Crain, Chief,
Fac. Oper.

This agency is responsible for construction, expansion and renovation of federal prison facilities located throughout the country. Projects under construction include federal correctional institutions in Marianna, Fla., Sheridan, Oregon, Bradford, Penn., Fairton, N.J., and Jesup, Ga. Construction spending during the 1988 fiscal year is expected to jump to \$175 million.

37

(45)

\$81.17

Missouri Division of Design and Construction
Box 809
Jefferson City, MO 65102
Ronald Norris, Dir.
Robert Keller, Asst. Dir.
M. Berendzen, Chief Arch.

Only competitive bidding for construction and negotiated contracts for design are used by this state agency. Some design but no construction done in house. Construction spending is expected to decrease by roughly 34 percent for the fiscal year ending in June 1989. Under way are a \$20 million archive and records center in Jefferson City and a \$51 million prison in Cameron.

40

(40)

\$70.00

Utah Div. of Facilities Construction & Mgmt.
4110 State Office Bldg.
Salt Lake City, UT 84114
Wayne Bingham,
Asst. Dir., Design & Const.

Educational facilities accounted for the largest share of construction (50 percent), followed by correctional facilities (20 percent). No design or construction done in house. Construction spending during the current fiscal year is expected to increase to \$100 million. Projects under way include prisons in Gunnison and Draper, and new facilities for the University of Utah, Utah State University and Weber State College.

35

(38)

\$90.00

Wisconsin Division of State Facilities Mgmt.
P.O. Box 7866
Madison, WI 53707
Jerald Slack, Administrator
Bob Brandherm, Chief Eng.
Gerald Germanson, Dir.,
Proj. Mgmt.

Prisons and facilities for state universities account for more than half of this agency's building construction. Some design but no construction done in house. Under way is a \$10 million, fabric-roofed athletic facility for the University of Wisconsin in Madison.

38

(48)

\$70.00

Baltimore Department of Public Works
700 Municipal Bldg.
Baltimore, MD 21202
Dave L. Montgomery, Head
Bureau of Const. Mgmt.

Reconstruction accounted for approximately \$30 million of the construction volume reported above. No design or construction done in house. Emphasis is on schools, libraries, police and fire stations, and various renovation projects.

41

(—)

\$60.00

Kansas Division of Architectural Services
625 Polk
Topeka, KS 66603
Edward DeVilbiss, Dir.

Projects under \$250,000 are designed in house, but no construction done in house. Construction breakdown includes prisons (50 percent), educational facilities (25 percent) and health care (10 percent). Only negotiated contracts for design and competitive bidding for construction are used.

36

(—)

\$84.55

New Jersey Division of Building Construction
CN 235
Trenton, NJ 08625
Thomas Bush, Dir.

At 35 percent, correctional facilities accounted for the greatest share of building construction, followed by schools (15 percent), offices (13 percent) and research facilities (10 percent). No design or construction done in house. Under way are a 1,000-bed prison and two office buildings in Trenton, and a veterans' nursing facility in Paramus.

39

(41)

\$70.00

Minnesota Div. of State Bldg. Const.
State Admin. Bldg., G-10
50 Sherburne
St. Paul, MN 55155
Bruce Taber, Dir.
A. Thomas Ulness,
Asst. Dir.

Only competitive bidding for construction and negotiated contracts for design are used. Some design but no construction done in house. This state agency's construction involved educational facilities (30 percent), correctional facilities (20 percent), offices (15 percent), health care (15 percent) and research facilities and warehouses (10 percent each).

42

(20)

\$53.00

District of Columbia Dept. of Public Works
2000 14th St., N.W.
Washington, DC 20009
Cyril Crandon, Admin.,
Design, Eng. & Const.
Mo Fateh, Chief,
Bldg. Const. Svcs.

Less than 50 percent of design and construction done in house. Building construction includes prisons (40 percent), schools (25 percent), offices (25 percent) and libraries, police and fire stations (10 percent). Only competitive bidding is used for construction.

Phoenix passes a \$1.1 billion bond issue

43

(—)

\$49.50

California Department of General Services/Office of the State Architect
400 P St.
Sacramento, CA 95814
M.J. Bocchicchio,
State Architect
Larry Guthrie, Chief,
Arch. & Eng.

More than 50 percent of design done in house. A direct construction unit within the department acts as general contractor on some jobs. Projects scheduled for completion in 1988 and 1989 include offices for the Department of Motor Vehicles, a divisional headquarters for the California Highway Patrol, a veterans' home and an armory for the National Guard.

44

(44)

\$35.00

Arkansas State Building Services
1515 W. Seventh St.
Suite 700
Little Rock, AR 72201
Jerry Sanders,
State Arch.

Projects under way include a \$4 million science complex at Arkansas Technical University in Russellville, and a convocation center and additions to a science building and an administration building at Arkansas State University in Jonesboro. Approximately 70 percent of construction involved educational facilities, followed by prisons (20 percent) and offices (10 percent).

45

(—)

\$27.77

City of Phoenix
125 E. Washington St.
Phoenix, AZ 85004
Ramon F. Miguez,
Special Asst. to City Mgr.

During the past year the citizens of Phoenix passed a \$1.1 billion bond issue to be spent over the next six years. As a result, construction volume is expected to increase by nearly 500 percent for the current fiscal year ending in June 1989. Among projects under way are a new \$100 million airport terminal, three museums, a \$38 million municipal center and an amphitheater.

46

(—)

\$23.69

Nebraska State Building Division
State Capitol Bldg.,
10th Floor
Lincoln, NE 68509
Ken Fougeron,
Administrator

Projects under \$100,000 are designed in house, but no construction done in house. Emphasis is on facilities for higher education, which accounted for 75 percent of construction. Volume is expected to increase by about 40 percent to \$34 million during the current fiscal year.

47

(49)

\$21.50

Colorado Department of Corrections
2862 South Circle
Suite 400
Colorado Springs, CO 80906
John Gillogley, Dir.,
Fac. Svcs.

Less than 50 percent of design and construction done in house. Scheduled for completion in early 1990 is a \$38.5 million, fast-tracked prison in Denver. Construction management is used as well as competitive bidding and negotiated contracts for design and construction.

48

(—)

\$20.00

Alaska Department of Transportation
P.O. Box Z, Mail Stop 2500
Juneau, AK 99811
Betsy Engle, Tommy
Heinrich,
Don Dieckmeyer,
Directors, Design & Const.

No design done in house; less than 50 percent of construction done in house. Health care and prison projects each accounted for 30 percent, followed by offices (20 percent), maintenance facilities (10 percent) and warehouses and research facilities (5 percent each). This state agency makes limited use of design/build.

49

(42)

\$20.00

Arizona Facilities Plng. and Construction Office
1700 W. Washington,
Rm. 604
Phoenix, AZ 85007
Dale Haggard, Mgr.
John Holmes, Chief Eng.

No design or construction done in house. Construction volume for the current year is expected to reach \$35 million. Under construction is a 200,000-sq.-ft. office building near the state capitol for the Department of Revenue.

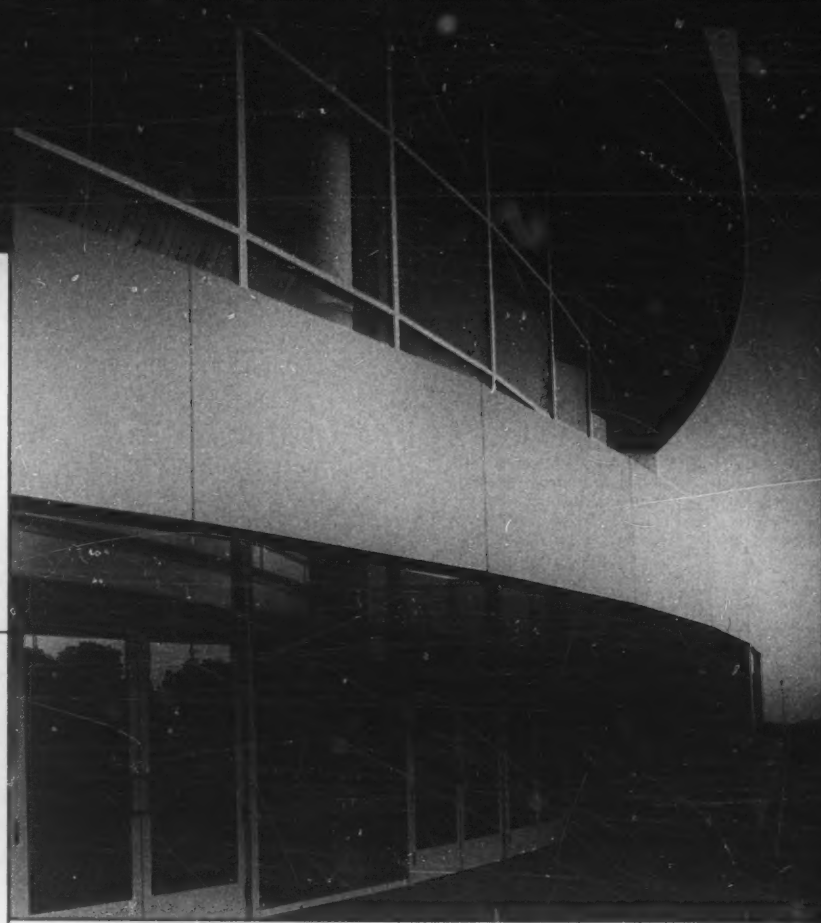
50

(—)

\$20.00

Texas Facilities Const. and Space Mgmt. Division
P.O. Box 13047
Austin, TX 78711
Robert A. Jenkins,
Acting Dir.

All work done by this state agency involved office construction. Only negotiated contracts for design and competitive bidding for construction are used. Less than 50 percent of design and no construction done in house. Construction spending during the current fiscal year is expected to decline to \$12 million.



The Arkansas State Building Services has completed a 10,000-seat convocation center at Arkansas State University in Jonesboro. The architect was Wittenberg, Delony & Davidson Inc., Little Rock. Photo: DeAnn Shields-Marley

HEALTH CARE

RENOVATION REMAINS AN ACTIVE BUILDING MARKET

The 20 largest Health Care developers put \$1.47 billion of construction in place during 1987

1 (1) \$250.00 Kaiser Foundation Hospital and Health Plans One Kaiser Plaza Oakland, CA 94612 W.J. Logan Jr., Mgr., Prop. & Fac. This nonprofit firm builds, owns and occupies 100 percent of the space it develops. Less than 50 percent of both design and construction is done in house. Firm uses design/build and construction management from outside firms. Preferred building methods include fast-track scheduling, competitive bidding for construction and negotiated contracts for both design and construction. Firm expects to place \$200 million of new construction and reconstruction in 1988.	2 (2) \$200.00 Hospital Corp. of America One Park Plaza Nashville, TN 37203 Ernie Mayer, VP, Design & Const. Construction volume estimated by BD&C. Firm builds health care facilities throughout the U.S., owning and occupying 85 percent of them while leasing 15 percent to others. Recent projects include a 230-bed hospital in Albuquerque, N.M., and a 246-bed hospital in Idaho Falls, Idaho. No design or construction is performed in house. A restructuring program instituted in the third quarter of 1987 resulted in the sale of 104 hospitals.	5 (7) \$120.56 American Medical International Inc. 414 N. Camden Drive Beverly Hills, CA 90210 Jerome Weisman, Dir., Fac. Construction volume estimated by BD&C. Firm develops hospitals in California, Texas, Maryland, Colorado, Nebraska, Missouri, Arkansas, Indiana and Massachusetts. No design or construction is done in house. Building methods include design/build from an outside firm, competitive bidding for construction and negotiated contracts for both design and construction. Firm builds, owns and occupies some 97 percent of its space.
	3 (4) \$172.00 Humana Inc. P.O. Box 1438 Louisville, KY 40201 James J. Walters, VP, Design & Const. Doug Heisler, Dir./Fac. Devel. Total construction volume includes \$152 million of reconstruction work. Firm primarily builds hospitals and medical office buildings in the Southeast and Southwest. A new emphasis is being placed on the expansion and renovation of existing facilities. Firm has nearly \$200 million of construction work presently under way in the U.S. All design but no construction is performed in house. Preferred building methods include fast-track scheduling.	6 (5) \$100.00 Charter Medical Corp. P.O. Box 209 Macon, GA 31298 J. Rodney Laughlin, Exec. VP, Plng. & Devel. R. Lee deLoache, Sr. Exec. Dir., Design & Const. Firm is best-known for the development of psychiatric hospitals and currently has more than 50 projects under way. This privately owned firm builds, owns and occupies 97 percent of its space and leases 3 percent to others. Firm does less than 50 percent of its design in house, while it does more than 50 percent of construction in house. Building methods include design/build from outside firms.
National Medical Ent. opened the John Douglas French Center for Alzheimer's Disease in Calif. Photo: Ira Margolin	4 (6) \$135.00 New York State Facilities Development Corp. 909 Third Ave. New York, NY 10022 Walter J. Hincley, Exec. Dir. Bruce H. Hoffman, Dir., Design & Const. Total construction volume of \$135 million includes \$88 million of reconstruction work. Firm develops new and rehabbed institutional and community-based care facilities for the mentally disabled throughout New York state. Projects currently in the design stage include the \$33 million Children's Psychiatric Hospital in Brooklyn and the \$13 million Pilgrim Psychiatric Center in Brentwood, N.Y.	7 (—) \$85.64 National Medical Enterprises Inc. 11620 Wilshire Blvd. Los Angeles, CA 90025 Sherwin E. Small, Exec. VP, Const. & Design Mark E. Schieff, Sr. VP, Const. & Design This publicly traded firm is a new addition to the listing this year. Firm does no design or construction in house. Building methods include design/build from outside firms, competitive bidding for construction and negotiated contract for construction. Firm is best-known for the development of acute-care hospitals. Recent projects include the Sierra Medical Center in El Paso, Texas.

GHM evaluates projects in the East, Midwest and South; Sisters develops a corporate office building in Peoria

8

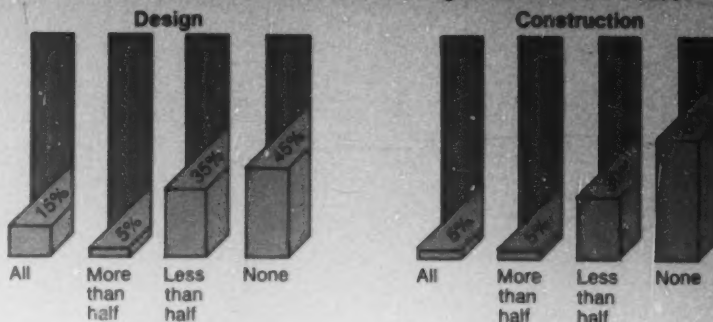
(14)

\$60.00

Life Care Services Corp.
800 Second Ave.
Des Moines, IA 50309
Steve Hoover,
VP, Dir., Devel.
Francis Snook,
VP, Weitz Const.

Firm does no design in house, while its parent company, the Weitz Corp., performs all construction duties. Building methods include fast-track scheduling and negotiated contract for design. Firm is best-known for the development of life care retirement communities as well as retail and commercial office buildings. Recent projects include the 189-unit Essex Meadows life care retirement community in Essex, Conn.

How much work do the Health Care organizations do in house?



9

(8)

\$46.25

Harris Methodist Health System
1325 Pennsylvania Ave.
Fort Worth, TX 76104
Ron L. Smith, Pres.
Bernard C. Alger,
Mng. Dir.

Recent projects include a tower addition to a hospital in Fort Worth, Texas, and the addition of 60 beds to the Harris Methodist Southwest hospital in Southwest Tarrant County, Texas. Firm primarily develops hospitals and administration buildings in Texas. This nonprofit organization builds, owns and occupies 100 percent of its space. No design or construction is done in house.

10

(16)

\$42.94

Universal Medical Buildings
839 N. Jefferson St.
Milwaukee, WI 53202
Joseph Checota, CEO
Jerry Spencer,
Sr. VP, Arch.

This publicly traded firm designs, engineers, constructs, develops, finances and leases medical office buildings and other outpatient health care facilities for hospitals and others on a guaranteed-price, turnkey basis. All design but no construction is performed in house. Firm uses negotiated contract for construction. Recent projects include the 81,000-sq.-ft. Sheboygan Clinic in Sheboygan, Wis., and the Fort Sanders satellite medical office building in Knoxville, Tenn.

11

(9)

\$40.00

GHM Inc.
333 E. River Drive
East Hartford, CT 06108
C.A. DiFatta, VP, Devel.
Karen Memmott,
Mgr., Design Programs

This privately owned firm manages retirement communities that feature on-site health centers and develops, acquires and operates long-term care facilities in the Eastern U.S. GHM is presently evaluating new projects in the East, Midwest and South. No design or construction is done in house. Recently completed retirement community projects include Vicar's Landing, a 27-acre complex that includes a 60-bed health care center in Ponte Vedra Beach, Fla., and the 258-unit Meadowood in Worcester County, Penn.

12

(3)

\$32.00

Sutter Hospital
1111 Howe Ave.
Sacramento, CA 95825
Mark Parrington,
VP, Strategy Supp. Group
Patrick Idler,
Dir., Fac. Devel.

Total construction volume includes \$2 million of reconstruction work. Firm is recognized for its development of health care facilities in northern California. Less than 50 percent of both design and construction is done in house. Building methods include design/build and construction management from outside firms, fast-track scheduling, competitive bidding for construction and negotiated contract for both design and construction.

13

(11)

\$30.00

Republic Health Corp.
15303 Dallas Pkwy.
Dallas, TX 75248
Tom Reisenbichler,
Const. Proj. Mgr.

Construction volume estimated by BD&C. Recent projects include the 77,000-sq.-ft. Emerson A. North Psychiatric Hospital in Cincinnati, the \$10 million Houston N.W. Medical Center Women's Pavilion in Houston, and the \$19 million, 97,000-sq.-ft. Lake Pointe Medical Center in Rowlett, Texas. Major expansions are planned for Texas, Ohio, California and Florida. This privately owned firm builds, owns and occupies 100 percent of the space it develops.

GHM recently completed Vicar's Landing, a retirement community that features a 60-bed health care center, located in Ponte Vedra Beach, Fla.

14

(17)

\$27.20

Shriners Hospitals for Crippled Children
2900 Rocky Point Drive
Tampa, FL 33607
 Burt Ravellette Jr.,
 Board Member
 John Cawood, Controller

This nonprofit charity organization develops hospitals in the U.S., Canada and Mexico. Recent projects include hospitals in Greenville, S.C., and Lexington, Ky. No design or construction is done in house. Building methods include construction management from an outside firm, fast-track scheduling and negotiated contract for construction. Firm builds, owns and occupies 100 percent of the space it develops.

15

(10)

\$28.00

New York City Health & Hospitals Corp.
346 Broadway, 12 West
New York, NY 10013
 Dennis R. Newman,
 Asst. VP, Chief Eng.
 Robert Weigand,
 Sr. Dir., Dept. Chief,
 Eng. & Const.

This government agency does more than 50 percent of its design in house but less than 50 percent of its construction in house. Current projects include the \$35 million Harlem Outpatient Department in New York City, the \$30 million Queens Skilled Nursing facility in Jamaica, N.Y., and the \$5 million renovation of the Coney Island emergency room in Brooklyn.

16

(—)

\$26.89

National HealthCorp. L.P.
P.O. Box 1398
Murfreesboro, TN 37130
 Robert Adams, Sr. VP
 Tom Morgan, Asst. VP,
 RE & Devel.

Firm is a new addition to the listing this year. Total construction volume includes \$4.5 million of reconstruction work. Firm develops nursing homes in Tennessee, Florida, South Carolina, Missouri and Kentucky. All design but no construction is done in house. Building methods include competitive bidding for construction. Firm expects to put \$11.2 million of construction in place during 1988. Firm builds, owns and occupies 100 percent of the space it develops.

17

(18)

\$25.00

Johns Hopkins Hospital
600 N. Wolfe St.
Baltimore, MD 21205
 Sally MacConnell,
 VP, Fac.

Construction volume estimated by BD&C. Firm has placed its emphasis on hospital-related renovation and expansion. Less than 50 percent of design and construction is done in house. Building methods include construction management from an outside firm, competitive bidding for construction and negotiated contract for construction. Firm builds, owns and occupies 100 percent of the space it develops.

Comprehensive Care Corp. chose a noninstitutional appearance for the CareUnit of Orlando chemical dependency treatment facility. Photo: Warren Faubel

18

(15)

\$20.00

Massachusetts General Hospital
Fruit St., Dept. WEH-2
Boston, MA 02114
 Anand K. Seth,
 Dir., Fac. Eng.

Construction volume estimated by BD&C. Firm does less than 50 percent of its design and construction in house. Building methods include design/build and construction management from outside firms, fast-track scheduling, competitive bidding for construction and negotiated contract for both design and construction. Firm builds, owns and occupies 100 percent of the space it develops.

19

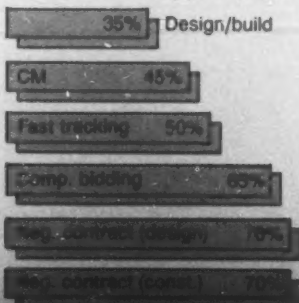
(13)

\$18.00

The Sisters of the Third Order of St. Francis
1124 N. Berkeley Ave.
Peoria, IL 61603
 Richard E. Richman,
 Corp. Dir., Eng.
 Wes Becker,
 Mgr., Fac. Design

Total construction volume includes \$10.3 million of reconstruction. The privately owned firm specializes in tertiary and acute-care hospitals, as well as medical centers. The firm owns and operates eight facilities in Michigan, Illinois and Iowa. Current projects include a corporate office building and an M.R.I. addition, both in Peoria. Less than 50 percent of design and construction is done in house.

How many of the Health Care organizations use these delivery processes?



20

(12)

\$17.00

Comprehensive Care Corp.
18551 Von Karman Ave.
Irvine, CA 92715
 Robert Masselmann,
 Exec. VP

Firm is recognized for the development of behavioral medical facilities nationwide. Recent projects include a \$6 million, 100-bed CareUnit drug treatment facility in Orlando; the \$12 million, 152-bed Brea Neuropsychiatric Center in Brea, Calif.; and the \$4.3 million, 50,000-sq.-ft. CareUnit facility in Aurora, Colo. No design or construction is performed in house. Building methods include negotiated contract for design and construction. Firm expects to put \$9 million of construction in place during 1988.

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BUILDING DESIGN & CONSTRUCTION (ISSN 0007-1407, Vol. 29, No. 12) is published monthly by Cahners Publishing Co., a division of Reed Publishing USA, 275 Washington St., Newton, MA 02158-1630. Terrence M. McDermott, President; Peter T. Ovi, Group Vice President; Jerry D. Neith, Vice President/Publishing Operations; J. Walsh, Financial Vice President/Magazine Division; Thomas J. Dellamaria, Vice President/Production and Manufacturing. Circulation records are maintained at Cahners Publishing Company, 44 Cook St., Denver, CO 80206. Phone: 303/868-4511. Second-class postage paid at Denver, CO 80206 and additional mailing offices. Postmaster: Send address corrections to BUILDING DESIGN & CONSTRUCTION, P.O. Box 990, Denver, CO 80206. BUILDING DESIGN & CONSTRUCTION copyright 1988 by Reed Publishing USA. Saul Goldweitz, Chairman; Ronald G. Segel, President and Chief Executive Officer. Annual subscription rates for nonqualified people: USA, \$55; Canada/Mexico, \$65; other countries, \$80 for surface mail and \$125 for air mail. Except for special issues where price changes are indicated, single copies of regular issues are available for \$6, \$8 and \$10 (USA, Canada/Mexico and foreign). Please address all subscription mail to BUILDING DESIGN & CONSTRUCTION, 44 Cook St., Denver, CO 80206. Reprints of BUILDING DESIGN & CONSTRUCTION are available on a custom printing basis at reasonable rates in quantities of 500 or more. For a specific quotation, contact: Katie Prysz, Manager, Marketing Services, 1350 E. Touhy Ave., Des Plaines, IL 60017-5080; (312) 635-8800.

BUILDING DESIGN & CONSTRUCTION

THE MAGAZINE FOR THE BUILDING TEAM



BUILDING DESIGN & CONSTRUCTION

THE MAGAZINE FOR THE BUILDING TEAM

VOL. 30, NO. 9

JULY 1989

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Orange County to get its first planned urban village. Residential units, retail shops, parks and a main boulevard will add a sense of community to Santa Ana, Calif.'s 66-acre MacArthur Place.

21

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On the cover: The Washington State Convention & Trade Center in Seattle links together two districts severed by an interstate highway. Photo: John Housel. Article begins on p. 40.

July, 1989 Building Design & Construction/1

BD&C's 13th Annual

Diversification contributes to revenues of top firms

By Christopher Olson, Managing Editor

Despite the contraction of the commercial construction market, the 300 firms responsible for the largest shares of building design and construction in the United States generally sustained their level of activity in 1988. Opportunities in the industrial and institutional markets contributed significantly to that activity.

The survey reports on the commercial, industrial and institutional (C.I.I.) work of 300 firms in eight categories: Architects, Architect/Engineers, Engineer/Architects, Engineers, Design/Builders, General Contractors, Construction Managers and Specialty Contractors. Despite wide variation in the work reported by the 300 firms this year, the general trend in revenues derived from C.I.I. work was up for the design segment during 1988, while the value of construction put in place by the contracting segment declined.

The 50 Engineer/Architects led the design groups in the survey with a 22 percent increase in revenues derived from C.I.I. projects, followed by the Engineers (+12 percent), Architect/Engineers (+8 percent) and Architects (+5 percent). The 20 Design/Builders included in the survey this year also had a prosperous year in 1988, increasing the value of the construction that they put in place by 10 percent over the firms holding those top 20 positions one year ago.

The Engineer/Architects, who reported the sharpest increase in billings in last year's survey, also have seen a surge of work driven by the facility needs of industrial and manufacturing firms, particularly those in the pharmaceutical, electronics and food and beverage industries. As these firms

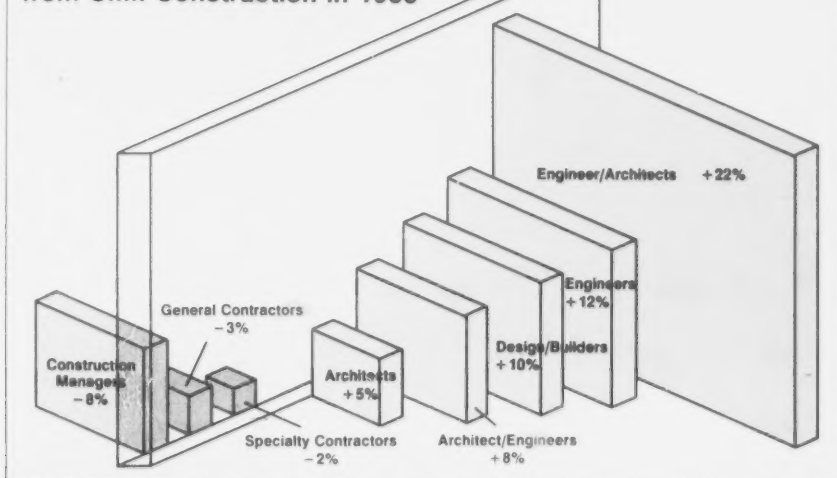
have faced increasingly stiff competition, often originating from overseas, they have had a continuous need to build new facilities and renovate existing ones in order to introduce new products quickly and to respond flexibly and efficiently to the marketplace. To meet these demands, the large E/A firms offer specialized services and forge ongoing partnering relationships with industry.

"What one sees is that clients, particularly the big ones, try to develop a smaller number of long-term consultant relationships," says Barry L. Buechner, vice president of Philadelphia-based engineer/architect Day & Zimmermann. "This approach helps them overcome quality control problems because the consultants know their standards and know their procedures. These firms realize that what they might win in a competitive bid situation for a consultant can quickly be lost in terms of product quality."

In many instances the work currently being done by outside engineering/architectural consultants was formerly done in-house. After having had to scale back their work forces in the late 1970s and early 1980s, many of the large industrial firms are reluctant to support an in-house department for this work. Moreover, these industrial firms have learned that it is cheaper to have the work done outside, according to Buechner. As a consequence of the partnering relationship, large E/A firms may operate a branch office primarily to serve the long-term needs of a particular client and only secondarily to serve a region or a local market. In turn, such offices may be staffed by specialists who formerly worked on the industry side rather than the consultant side. "The larger engineering/architectural firms are simply able

The largest firms tended to lead the overall increases in 1988 C.I.I. revenues reported for the design segment. The contracting segment, which reported moderate declines, seemed to reflect more directly the slackening in construction expenditures nationwide.

Percent Change in Revenues Derived from C.I.I. Construction in 1988



Design/Construct 300

to sustain more specialists," says Bruce Dell, director of marketing services for Lockwood Greene Engineers in Spartanburg, S.C.

Although the total increase in billings during 1988 for the Engineer/Architects category was 22 percent, the very largest firms led this increase for the group as a whole. The firms holding the top ten positions in the category this year actually reported a 29 percent increase over the firms holding those positions a year ago. The prosperity of the very largest firms may be due in part to their ability to incorporate more specialties into their practices.

Expanding the scope of services was also a contributing factor to the increase in billings reported by the Architects and Architect/Engineers, despite a continuing slowdown in commercial work. One-quarter of the 50 Architects noted that they had either opened new offices or begun to offer a more specialized service. The Hillier Group, for example, provides a new site analysis service, while the Ritchie Organization has broadened its presence in the research sector, and Kaplan/McLaughlin/Diaz expanded its graphics and urban planning services. Among the Architect/Engineers, Anderson DeBartolo Pan expanded its construction services to include program and construction management, while KZF added a new interiors group.

The largest firms outperform their smaller competitors

As is the case with the Engineer/Architects, there is a disparity in the performance of the firms in the other design categories, with the largest maintaining a distinct edge over

the smaller. For example, while the Architects as a group increased billings by 5 percent, the top 10 firms in that category increased their billings by 9 percent over the firms in those same positions last year. These top 10 firms accounted for 76 percent of the \$27.6 million increase in billings for all 50 Architects this year, with Kohn Pedersen Fox reporting the single sharpest one-year increase — \$8.4 million. Meanwhile, the billings of the firms in the final ten positions last year actually fell by nearly 4 percent compared to their counterparts in this year's survey.

The impact of slackening construction expenditures nationwide was felt more directly by the contractors in this year's survey. The value of C.I.I. construction put in place by the 50 General Contractors fell by 3 percent during 1988, while the 20 Specialty Contractors reported a 2 percent decline, and the 10 Construction Managers reported an 8 percent fall in fees. By nearly all accounts, the market for contracting was spotty in 1988 and remains so in 1989, requiring contractors to aim their marketing efforts with precision.

"We have to be much more selective to be sure that the deals we're pursuing are indeed good ones," said John Nicolay, senior vice president of marketing with general contractor McDevitt & Street. "Subcontractors are feeling the pinch too, and so we have to be far more selective to ensure that we're using subcontractors who can perform and not just those who have the lowest price on a given day." Added vice president Bruce Rich of St. Louis-based McCarthy, "We have to be responsive when we see an opportunity." Δ

How the Design/Construct survey is compiled

BD&C's Design/Construct 300 consists of the firms that designed and/or constructed the largest volumes of commercial, institutional and industrial (C.I.I.) buildings in the United States during 1988. These 300 firms are divided into eight categories: Architects (50 members), Architect/Engineers (60), Engineer/Architects (50), Engineers (40), Design/Builders (20), General Contractors (50), Construction Managers (10) and Specialty Contractors (20).

Design firms are ranked on the basis of billings for design and planning services performed by their own personnel during 1988 or their most recently completed fiscal year. Contracting firms and design/builders are ranked on the value of the construction put in place during 1988 for which they were contractually responsible. Construction managers are ranked on the basis of fees earned rather than on the value of the construction managed. Several firms are listed in more than one category if the volume of their work in more than one discipline was great enough to qualify them.

Please note that any revenues unrelated to C.I.I. buildings have been excluded from the figures used for ranking purposes in this survey. Thus every effort has been made to subtract revenues derived from roads, dams, bridges and single-family housing, as well as utility plants, water and waste treatment plants, refineries and chemical processing plants. Pass-through billings representing work done by outside consultants also have been excluded from the ranking figures.

To compile the data for the survey, BD&C mails a questionnaire each year to approximately 1,500 firms. In cases where BD&C was unable to receive a response to the ques-

tionnaire, C.I.I. revenues were estimated. Any such estimates are noted at the beginning of the individual report devoted to each firm in the survey. The sample report below highlights the information presented in the survey. Δ

Previous rank	Current rank	Organization name & address	News of the firm
	16 (21) \$11.83	Thompson, Ventulett, Stainback & Associates Inc. CNN Center Suite 1200 North Tower Atlanta, GA 30303-2705 (404) 688-8531	
		Staff of 174 includes 60 registered architects. Fifteen percent of firm's billings was for interior design. Firm is known for design of R&D, office, retail and convention center facilities. Recent projects include a pair of convention centers in Atlanta and Mobile, Ala., and a shopping mall in Pineville, N.C. William P. Thompson Jr., Pres.	
	C.I.I. volume (in millions)	Officers in charge of design & construction	

ARCHITECTS

ARCHITECTS DIVERSIFYING INTO NEW MARKETS

Nearly 25 percent of the top firms have expanded the scope of their services

1

(1)
\$52.20

**Gensler and Associates/
Architects**
550 Kearny St.
San Francisco, CA 94106
(415) 433-3700

Gensler opened a London office and also expanded its airport work. For calendar 1988, commercial work comprised 95 percent of its billings while institutional work comprised the balance. Sixty percent of its work is interior design and 15 percent involves reconstruction. Current projects include a 370,000-sq.-ft. terminal for Delta Airlines. *M. Arthur Gensler Jr., Pres.*

2

(5)
\$32.80

**Kohn Pedersen Fox
Associates**
111 West 57th St.
New York, NY 10019
(212) 977-6500

KPF continues to specialize in design of corporate and investment office buildings, hotels and TV facilities. Commercial work accounted for 90 percent of its billings for calendar 1988, while institutional and industrial work each accounted for 5 percent. Current projects include 125 Summer Street, a \$75 million office building in Boston. *A.E. Kohn, Sheldon Fox, William Pedersen, Ptnrs.*

3

(3)
\$28.59

NBBJ
111 S. Jackson St.
Seattle, WA 98104
(206) 223-5555

Formerly named the NBBJ Group, firm provides full architectural and planning services from pre-design to construction administration. Firm specializes in health care, retail and educational facilities. Government work comprised 40 percent of its billings for last fiscal year. Recent projects include a medical research building in Sacramento and a state office tower in Columbus, Ohio. *Friedrich K.M. Baum, Managing Ptnr.*

4

(4)
\$25.92

The Hillier Group
500 Alexander Park, CN-23
Princeton, NJ 08543
(609) 452-8888

Firm has launched a new site analysis service and engages in specialized construction management. Corporate, research and institutional facilities are among building types the firm emphasizes. Twenty percent of its work is interior design and 20 percent involves reconstruction. Recently completed projects include the 700,000-sq.-ft. AT&T headquarters in Bridgewater, N.J. *J. Robert Hillier, Pres., CEO.*

5

(2)
\$25.65

**Swanke Hayden Connell
Architects**
400 Park Ave.
New York, NY 10022
(212) 826-1880

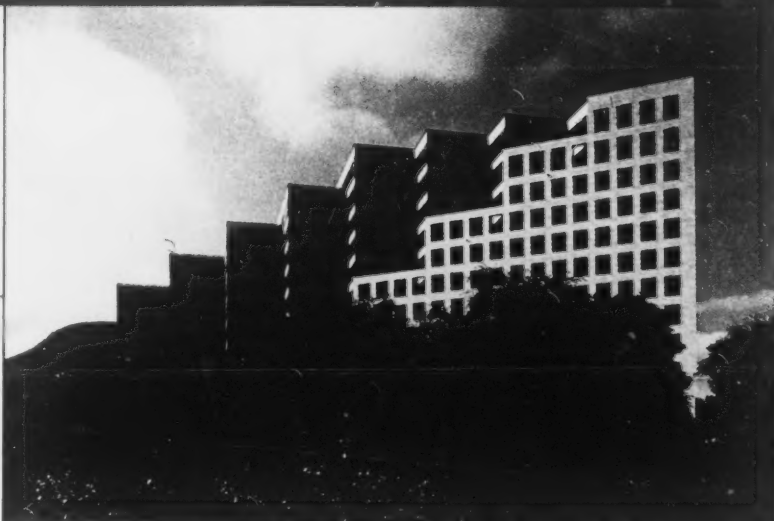
Staff of 351 includes 54 registered architects. Interior design accounted for 40 percent of firm's billings. Twenty percent of its work involved reconstruction. Current projects include 4 Columbus Circle, a 7-story, 104,000-sq.-ft. office building in Manhattan that SHC will occupy upon its completion early next year. *Richard S. Hayden, Managing Prin.*

6

(6)
\$19.73

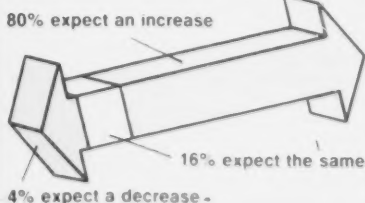
I.M. Pei & Partners
600 Madison Ave.
New York, NY 10022
(212) 751-3122

Firm has purchased a new subsidiary in the Netherlands. Commercial projects comprised 53 percent of firm's billings for calendar 1988, while institutional projects comprised 47 percent. Firm is best-known for large-scale projects including headquarters, investment buildings and housing developments. Current projects include the \$140 million First Interstate Tower in Los Angeles. *I.M. Pei, Ptnr.*

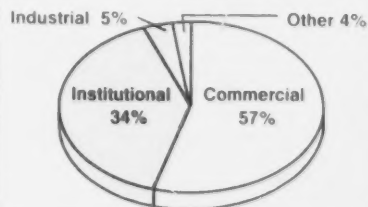


Gensler and Associates/Architects designed Columbia Pictures' Studio Plaza, a 13-story office building in Burbank, Calif. Photo: John Connell

What is the Architects' Outlook for Revenues in 1989?



Breakdown of the Architects' Billings



ARCHITECTS

7
(8)
\$18.30

The Architects Collaborative Inc., TAC
46 Brattle St.
Cambridge, MA 02138
(617) 868-4200

Staff of 239 includes 65 registered architects. Firm places emphasis on developer, corporate, educational and public sector clients. Sixteen percent of firm's 1988 billings were derived from work outside of the U.S. Recent projects include a 63,000-sq.-ft. cancer research center for the University of Kentucky in Lexington and a 493,000-sq.-ft. condominium in Boston. *John F. Hayes, Pres.*

8
(7)
\$16.50

Kaplan/McLaughlin/Diaz
222 Vallejo St.
San Francisco, CA 94111
(415) 398-5191

Billings estimated by BD&C. Firm is known for design and planning of retail, health care, housing and hotel projects. Projects under way include Two Rodeo Drive, a 107,200-sq.-ft. retail complex in Beverly Hills, Calif., and the Wilshire, a 97-unit condominium high rise in Los Angeles. *Herbert McLaughlin, Prin.; James Diaz, Prin.; Roy Laika, Pres.*

9
(13)
\$16.23

Jung/Brannen Associates Inc.
177 Milk St.
Boston, MA 02109
(617) 482-2299

Firm has established an Istanbul office to capitalize on growing opportunities in the international market and also has expanded its graphics and urban planning services. Interiors services continue to account for a large percentage of billings and firm expects this figure to increase over the next several years. Marketing emphasis includes high-tech facilities and labs. *Yu Sing Jung, Pres.; Robert Brannen, Chmn.*

10
(14)
\$15.90

Cooper Carry & Associates
3520 Piedmont Road, N.E.
Suite 200
Atlanta, GA 30305
(404) 237-2000

Interior design accounted for 10 percent of firm's billings for fiscal year ending January 1989. Commercial design comprised nearly 100 percent of billings for same time period. Ten percent of work involved reconstruction. Firm is known for wide range of project types including offices, hotels, schools, retail centers and health care facilities. *Jerome M. Cooper, Chmn.; Walter T. Carry, Pres.*

11
(12)
\$15.50

The Callison Partnership
1423 Third Ave., Suite 300
Seattle, WA 98101
(206) 623-4646

Staff of 225 includes 77 registered architects. Firm primarily engages in commercial design, with an emphasis on office, retail, hospitality and mixed-use projects. For fiscal year ending September 1988, interior design accounted for 30 percent of its billings. Current projects include the \$50 million expansion and renovation of a shopping center in Riverside, Calif. *David P. Lindsey, Pres.*

12
(15)
\$13.75

Smallwood, Reynolds, Stewart, Stewart & Assoc.
3565 Piedmont Road
Suite 303
Atlanta, GA 30305
(404) 233-5453

Firm continues to diversify geographically and has increased its activity in the high-rise residential market. Other primary building types included office, hotel, retail and mixed-use developments. Recent projects include Church St. Centre, a 180,000-sq.-ft. retail center in Nashville and a 192-room Omni Hotel in Durham, N.C. *Philip Smallwood, Prin.*

13
(10)
\$13.67

The Stubbins Assoc. Inc.
1033 Massachusetts Ave.
Cambridge, MA 02138
(617) 491-6450

Firm places emphasis on design of office, educational and laboratory facilities. Interior design accounted for nearly 13 percent of billings for last fiscal year. Recent projects include Suffolk County Jail, a 453-bed detention facility in Boston and Fifth Avenue Place, an \$85 million office tower in Pittsburgh. *Hugh Stubbins, Chmn.; Richard Green, Pres.*



Designed by Kaplan/McLaughlin/Diaz, Los Angeles' 97-unit Wilshire condominium will open next year.

14
(16)
\$13.50

The Nadel Partnership
1990 S. Bundy, 4th Floor
Los Angeles, CA 90025
(213) 826-2100

Firm opened a new office in Sacramento this year. For fiscal year ending January 1989, commercial projects accounted for 65 percent of its billings while industrial projects accounted for 30 percent. Firm is best-known for office design. Current projects include a 550-room Ramada hotel in Los Angeles and a 770-unit apartment complex in Costa Mesa, Calif. *Herbert Nadel, CEO.*

15
(28)
\$13.20

Stone, Marraccini and Patterson
1 Market Plaza
Spear St. Tower, Suite 400
San Francisco, CA 94105
(415) 227-0100

Institutional design accounted for nearly 90 percent of firm's billings for calendar 1988. Firm places emphasis on design of laboratory, university and health care facilities. Recent projects include a new 120-bed satellite medical facility for the La Jolla campus of the University of California, San Diego. *Wilbur H. Tusler, Pres.*

16
(21)
\$11.83

Thompson, Ventulett, Stainback & Associates Inc.
CNN Center
Suite 1200 North Tower
Atlanta, GA 30303-2705
(404) 688-8531

Staff of 174 includes 60 registered architects. Fifteen percent of firm's billings was for interior design. Firm is known for design of R&D, office, retail and convention center facilities. Recent projects include a pair of convention centers in Atlanta and Mobile, Ala., and a shopping mall in Pineville, N.C. *William P. Thompson Jr., Pres.*



The 778,000-sq.-ft. Fifth Avenue Place in Pittsburgh was designed by Stubbins ASSOC. Photo: Nick Merrick, Hedrich-Blessing

17

(17)

\$11.63

**Langdon Wilson
Architecture Planning**
1055 Wilshire Blvd.
Los Angeles, CA 90017
(213) 259-1186

Firm was formerly named Langdon Wilson Mumper. Its work encompasses architecture, master and urban planning, and interior and graphic design. Commercial projects comprised 60 percent of calendar 1988 billings, while institutional and industrial projects comprised 25 percent and 5 percent, respectively. Under construction is 777 Tower, a 51-story Los Angeles office building. *Ernest C. Wilson Jr., Managing Ptnr.*

18

(—)

\$11.50

Tribble Harris Li Inc.
324 N. College St.
Charlotte, NC 28202
(704) 333-6686

Firm ranked in A/E category last year and has since eliminated its engineering group. Staff of 142 includes 78 registered architects. Forty-four percent of work for last fiscal year was derived from projects outside of the U.S. Firm emphasizes a wide variety of commercial building types including offices, retail facilities, hotels and mixed-use projects. *Gerald Li, Chmn.; Michael Tribble, Vice Chmn.; Peter J. Denner, Pres.; COO*

19

(9)

\$11.00

Beyer Blinder Belle
41 E. 11th St.
New York, NY 10013
(212) 777-7800

Seventy percent of BBB's work involved reconstruction during last fiscal year and 30 percent was for federal, state and local governments. Firm has reorganized its marketing department into a "project development" group with responsibilities extending beyond securing clients. Firm emphasizes commercial renovation, historic preservation and waterfront development planning. *John H. Beyer, Richard Blinder, John Belle, Ptnrs*

20

(—)

\$10.50

Payette Associates Inc.
40 Isabella St.
Boston, MA 02116
(617) 423-0070

Staff of 130 includes 43 registered architects. Academic research facilities comprised one-half of firm's billings for calendar 1988. Firm also specializes in high-tech hospital and corporate facilities. Forty percent of its work involved reconstruction last year; 10 percent was interior design. Projects include a 430,000-sq.-ft. ambulatory care center for Johns Hopkins Hospital, Baltimore. *Thomas M. Payette, Pres.*

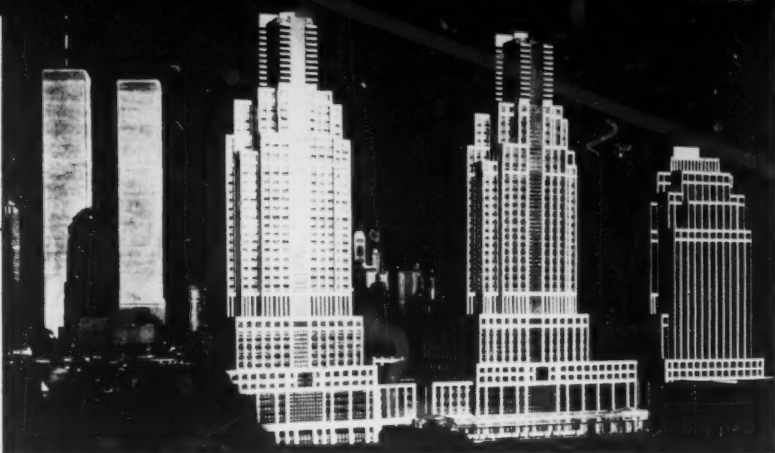
21

(36)

\$10.50

**SGPA Planning
and Architecture**
1565 Hotel Circle South
San Diego, CA 92108
(619) 297-0131

Firm places emphasis on land planning, mixed-use projects and office, hotel and major retail facilities. Recent projects include land planning of a 326-acre site in Chula Vista, Calif., that includes industrial, commercial, residential and marina-related uses. Canyon Springs, a 412,000-sq.-ft. mixed-use development in Riverside, Calif., was completed last year. *Arthur D. Allard, Managing Prin.*



Beyer Blinder Belle master planned Harborside Financial Center, a \$900 million mixed-use project in Jersey City, N.J.

22

(37)

\$10.29

Gruen Associates
6330 San Vicente Blvd.
Los Angeles, CA 90048
(213) 937-4270

Nearly 100 percent of firm's billings for last year were commercial. Twenty percent of its work involved reconstruction. Firm places emphasis on mixed-use centers, hotels, office buildings, regional shopping centers and convention centers. Current projects include the \$65 million renovation and restoration of the Regent Beverly Wilshire hotel in Beverly Hills, Calif. *Ki Suh Park, Managing Ptnr.*

23

(20)

\$10.00

The Luckman Partnership
9220 Sunset Blvd.
Los Angeles, CA 90069
(213) 274-7755

Firm's partners have delegated routine administrative tasks to key staff members, allowing them to personally participate, to an unusual degree, in each of the firm's projects. Firm is noted for office, sports and entertainment facilities, as well as renovation projects. Current projects include the \$20 million restoration of Los Angeles' First Interstate Bank following a fire. *James M. Luckman, Ptnr.*

24

(40)

\$9.90

**Wimberly Allison Tong
& Goo Architects**
2222 Kalakaua Ave.
Honolulu, HI 96815
(808) 922-1253

Firm was formerly named Wimberly Whisenand Allison Tong & Goo. A planning subsidiary is based in Honolulu. Eighteen percent of its revenues was derived from work outside the U.S. Luxury hotels and resorts continue to comprise the majority of its work. Current projects include Ritz Carlton hotels in Marina Del Rey, Calif., and Mauna Lani, Hawaii. *Donald Goo, Pres, CEO*

25

(23)

\$9.62

**Leason Pomeroy Assoc.
Inc.**
44 Plaza Square
Orange, CA 92666
(714) 639-5541

Firm also has offices in Los Angeles, San Diego and Sacramento. Interior design accounted for 20 percent of its billings for last fiscal year. Firm is best-known for a variety of commercial building types including corporate headquarters, retail, mixed-use and hospitality projects. Recent projects include a 224,000-sq.-ft. corporate headquarters in Irvine, Calif. *Leason F. Pomeroy III, CEO*

26

(24)

\$9.36

**Shepley Bulfinch
Richardson and Abbott**
40 Broad St.
Boston, MA 02109
(617) 423-1700

Institutional work accounted for 91 percent of firm's billings. Thirty percent of work involved reconstruction, 15 percent was for government agencies. Firm continues to emphasize university, health care and corporate facilities. Current projects include the Dana-Farber Cancer Institute, a \$21 million research lab in Boston. *George R. Mathey, Pres.*

27

(29)

\$9.34

The Martin Organization
242 East 22nd St.
Philadelphia, PA 19103
(215) 665-1080

Firm has expanded its landscape architecture staff and implemented computer-aided project management systems for delivery and quality control. Firm places marketing emphasis on high-rise residential projects and large, mixed-use complexes. Current projects include the 350-room Hotel Nicole in Las Vegas. *Richard E. Martin, Pres.*



Hope College's Van Wylen Library in Holland, Mich., is among Shepley Bulfinch Richardson and Abbott's recent projects.

ARCHITECTS

28

(27)
\$9.30

Morris Architects
P.O. Box 22715
Houston, TX 77227
(713) 622-1180

Firm's Washington, D.C., Baltimore and Orlando, Fla., offices have emerged as major profit centers. Its Houston office has resurged due to geographic and project diversification. Commercial projects comprised 65 percent of its billings, while institutional accounted for the balance. Twenty-five percent of billings was for interior design work. *John H. Weigman, Pres.*

29

(25)
\$9.20

The Grad Partnership
One Gateway Center
Newark, NJ 07102
(201) 621-1700

Staff of 135 includes 40 registered architects. Interior design accounted for 20 percent of firm's billings. Twenty percent of work was for government agencies. In addition to design, firm engages in master planning and economic and site feasibility studies. Office, airline and correctional facilities are among building types the firm emphasizes. *Howard Grad, CEO*

30

(33)
\$8.85

TRO/The Ritchie Organization
80 Bridge St.
Newton, MA 02158
(617) 969-9400

TRO has expanded its presence in the research science industry and increased its involvement in facilities master planning, facilities upgrade and interior design. Firm also specializes in health care and retirement facilities. Eighty percent of its work involved reconstruction for fiscal year ending September 1988, eighty percent of billings for institutional projects. *Wendell R. Morgan Jr., Pres.*

31

(—)
\$8.50

Taylor Clark Architects Inc.
149 Fifth Ave.
New York, NY 10010
(212) 460-8840

Staff of 150 includes 48 registered architects. Firm also has offices in London. Institutional design accounted for 94 percent of its billings for calendar 1988. Forty percent of its work involved reconstruction. Firm is best-known for health care facilities and has been receiving commissions for the design of AIDS nursing units. *William J. Taylor, Chmn.; Richard C. Clark, Pres.*

32

(26)
\$8.22

CHK Architects & Planners
9300 Georgia Ave.
Silver Spring, MD 20910
(301) 588-4800

CHK places emphasis on a wide variety of building types, including multifamily and elderly housing, institutional and commercial offices, shopping centers, and religious and educational facilities. Current projects include Centerpointe, a 400,000-sq.-ft. office/retail/restaurant complex in Fairfax, Va., and a 300,000-sq.-ft. office/day care facility in Laurel, Md. *Jack C. Cohen, Chmn.; Jack S. Kerxton, CEO*



Designed by Ritchie Organization's Sarasota, Fla., office, this 347-car parking structure in Venice, Fla., was completed in June 1988. Photo: Robert Mikrut

33

(—)
\$8.20

Ehrlich-Rominger Architects
4800 El Camino Real
Los Altos, CA 94022
(415) 949-1300

Firm specializes in area of microelectronics and high-technology manufacturing facilities, which comprise 50 percent of its work. Secondary markets include corporate office and research facilities, which account for 20 percent of its work and educational/institutional facilities which account for 15 percent. Firm opened branch offices in Sacramento and San Francisco. *Joseph Ehrlich, Pres.*

34

(—)
\$8.20

Rochlin, Baran & Balbona Inc.
10980 Wilshire Blvd.
Los Angeles, CA 90024
(213) 473-3555

Institutional design accounted for 90 percent of firm's billings. Fifty percent of work involved reconstruction. Recent projects include the 87,000-sq.-ft. Directors Guild of America Headquarters in Los Angeles and a 136-bed medical center in Honolulu. Firm's staff of 81 includes 29 registered architects. *Joel A. Jaffe, Pres.*

35

(32)
\$8.17

Bonsignore, Brignati & Mazzotta
275 7th Ave., 14th floor
New York, NY 10001
(212) 633-1400

Interior design accounted for 40 percent of BB&M's billings for calendar 1988. Eighty-five percent of work involved reconstruction. Commercial buildings comprised 85 percent of firm's billings, while institutional buildings comprised 10 percent. *Richard Bonsignore, Pres.*

36

(18)
\$8.00

The Spector Group
3111 New Hyde Park Road
North Hills, NY 11040
(516) 365-4240

Firm has increased its share of institutional and retail work to offset declines in office building market. Interior design accounted for 20 percent of firm billings for calendar 1988. Recent projects include the master planning of Maimonides Hospital, a hospital community in Brooklyn, N.Y., and the design of a 675,000-sq.-ft. office and R&D center in Islandia, N.Y. *Michael H. Spector, Prin.*

37

(34)
\$7.90

Murphy/Jahn Inc.
35 E. Wacker Drive
Chicago, IL 60601
(312) 427-7300

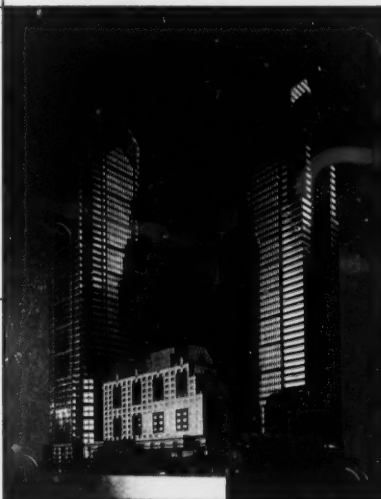
Billings estimated by BD&C. Fifteen percent of firm's revenues was derived from projects outside the U.S. Firm continues to place emphasis on office buildings, mixed-use developments, convention centers and transportation facilities. Recent projects include the Barnett Bank in Jacksonville, Fla. *Helmut Jahn, Pres., CEO*

38

(34)
\$7.90

Russo + Sonder Architects
225 Park Ave. South
New York, NY 10003
(212) 477-5599

Staff of 86 includes 36 registered architects. Nearly one-half of work for calendar 1988 involved reconstruction. Firm places emphasis on design of hospitals, research labs, clinics and other health-related facilities. Current projects include the \$21.8 million New York State Veterans Nursing Home in Stony Brook. *Joseph Shein, Managing Ptnr.*



Phase II (right) of the Murphy/Jahn-designed Liberty Place in Philadelphia will be completed next year.

ARCHITECTS

39

(—)
\$7.80

Lohan Associates
225 N. Michigan Ave.
Suite 800
Chicago, IL 60601
(312) 938-4455

Staff of 110 includes 41 registered architects. Firm has developed a diversified practice that includes the planning and design of corporate campuses, cultural and institutional facilities, large-scale commercial developments and residential buildings. Current projects include an oceanarium at Chicago's Shedd Aquarium and the Nicollet Mall in Minneapolis. *Dirk Lohan, Pres.*

Eighty percent of the top 50 Architects practice interior design; on the average, it accounts for 16 percent of their billings

40

(22)
\$7.70

Loebl Schlossman & Hackl
130 E. Randolph
Suite 3400
Chicago, IL 60601
(312) 565-1800

Firm continues to specialize in architecture and interior design for commercial, health care, retail and residential facilities. Fifteen percent of its work involved reconstruction last year. Current Chicago projects include City Place, a 40-story, mixed-use complex that will feature office space and an all-suite hotel and St. Clair Place, a \$90 million, 28-story office tower. *Donald J. Hackl, Pres.*

43

(31)
\$7.50

The Voinovich Companies
2450 Prospect
Cleveland, OH 44115
(216) 621-9200

Billings estimated by BD&C. Fifteen percent of firm's work involved reconstruction; 75 percent was institutional. Firm is best-known for office renovation and the design of criminal justice facilities, and low-income and private housing. Current projects include the 2,200-bed California State Prison in Lancaster. *Paul V. Voinovich, CEO, Pres.*

47

(—)
\$6.42

Vickrey/Ovresat/Awsumb Assoc.
435 N. Michigan Ave
Chicago, IL 60611
(312) 644-3464

Firm also has an office in Orlando, Fla. Interior design accounted for 40 percent of its billings. Nearly 50 percent of work involved reconstruction. Firm emphasizes design of corporate, educational, hospitality and medical facilities. Firm was commissioned to provide ongoing architectural and engineering services for Little Company of Mary Hospital in Evergreen Park, Ill. *Michael A. Toolis, Pres., Managing Prin.*

41

(—)
\$7.60

Zimmer Gunsul Frasca Partnership
320 S.W. Oak, Suite 500
Portland, OR 97204
(503) 224-3860

In an effort to diversify geographically, ZGF has established offices in Seattle and Newport Beach, Calif. Firm's work encompasses a wide spectrum of building types, including office, university, health care and high-tech industrial facilities. Firm currently is proceeding with the master planning, programming and design of the Oregon Museum of Science and Industry in Portland. *Robert G. Packard, Managing Ptnr.*

44

(30)
\$7.41

Peckham Guyton Albers & Viets Inc.
200 N. Broadway,
Suite 1000
St. Louis, MO 63102
(314) 231-7318

Forty percent of firm's work involved reconstruction for fiscal year ending August 1988. Firm specializes in design of corporate and public sector headquarters. PGAV is providing master planning, architecture and interior design services for a 130,000-sq.-ft. cultural arts center at Johnson County Community College in Johnson County, Kan. *Fred F. Guyton, Pres.*

48

(—)
\$6.29

Nix Mann and Associates
1382 Peachtree St., N.E.
Atlanta, GA 30309
(404) 873-2300

Staff of 70 includes 30 registered architects. Firm specializes in the planning and design of health care facilities. Institutional projects accounted for 100 percent of firm's billings for calendar 1988. Fifty percent of its work involved reconstruction. Recent projects include the \$34 million expansion of Emory University Hospital in Atlanta. *Henry A. Mann, Chmn.; I. Lewis Nix, Pres.*

42

(—)
\$7.50

Ehrenkrantz Eckstut Whitelaw
23 E. Fourth St.
New York, NY 10003
(212) 353-0400

Firm was formerly named Ehrenkrantz Group and Eckstut. Staff of 76 includes 26 registered architects. Firm has placed new emphasis on projects for private developers and institutional clients and is also known for corporate research and technology centers. Current projects include Newport Tower, a 1 million-sq.-ft. office building in Jersey City, N.J. *Græme A. Whitelaw, Managing Prin.*

45

(—)
\$7.30

McClellan Cruz Gaylord & Associates
199 S. Los Robles Ave.,
Suite 400
Pasadena, CA 91101
(818) 793-9119

Firm also has offices in San Diego and Irvine, Calif. Fifty-five percent of its work involves reconstruction. Firm specializes in retail, hotel, office and government facilities. For fiscal year ending June 1988, 85 percent of work was commercial, 10 was institutional and 5 percent was industrial. *Robert R. McClellan, Chmn.; Frederick J. Gaylord, Pres.; Adolfo R. Cruz, Exec. VP*

49

(—)
\$6.24

Korsunsky/Etal Architects
300 First Ave., N., Suite 500
Minneapolis, MN 55401
(612) 339-4200

Firm has an interior design subsidiary in Minneapolis. Firm has increased its focus on elderly housing facilities and is also known for its design of retail, office, medical and multifamily housing projects. Twenty percent of its work for last fiscal year involved reconstruction. Commercial projects accounted for 90 percent of its billings, while institutional projects comprised the balance. *Ronald Krank, Pres.*

Vickrey/Ovresat/Awsumb was renovation architect of Moench Hall at the Rose Hulman Institute of Technology in Terre Haute, Ind.



46

(—)
\$6.90

Lendrum Associates Inc.
3033 N. 44th St.
Phoenix, AZ 85018
(602) 955-2100

Staff of 75 includes 26 registered architects. Firm engages in architecture, planning and interior design, and places particular emphasis on industrial, commercial office and printing facilities. Commercial and industrial buildings each comprised 40 percent of its billings last year, while institutional comprised 15 percent. Recent projects include printing facilities in Evansville, Ind., and Rochester, Minn. *Peter A. Lendrum, Pres.*

50

(—)
\$6.20

HMC Architects Inc.
500 East E Street
Ontario, CA 91764
(714) 983-9623

Staff of 130 includes 32 registered architects. Firm places emphasis on health care and educational facilities. Twenty-five percent of work involved reconstruction for fiscal year ending January 1989. Current California projects include a \$140 million, 800,000-sq.-ft. hospital in Baldwin Park and a medical mall in Moreno Valley. *James D. Chase, Pres., CEO*

ARCHITECT/ ENGINEERS

A/E REVENUES INCREASE BY 8 PERCENT
Optimism abounds with 68 percent of top firms
anticipating increased revenues in 1989

1 (1) \$78.00 Skidmore, Owings & Merrill 33 W. Monroe Chicago, IL 60603 (312) 641-5959 Billings estimated by BD&C. Among firm's 10 largest projects are AT&T Corporate Center in Chicago, the Arab International Bank Center/World Trade Center in Cairo and Canary Wharf in London. Activity includes 70 percent commercial, 20 percent institutional and 5 percent industrial. Major offices are also in Los Angeles, San Francisco, New York, Washington and London. <i>Thomas J. Eyerman, Ptnr.</i>	5 (2) \$49.25 HDR Inc. 8404 Indian Hills Drive Omaha, NE 68114 (402) 399-1000 Subsidiaries include Henningson Durham and Richardson Inc. and HDR Engineering Inc. HDR is known for health care, justice and corporate facility design. A current project is a health sciences center at King Abdulaziz University in Saudi Arabia. Activity includes 26.5 percent institutional, 17.3 percent industrial and 5.8 percent commercial. Staff of 1,140 includes 110 registered architects. <i>Francis Jelensperger, Exec. VP</i>	8 (8) \$36.00 Hunter Environmental Services Inc. 6737 Southpoint Drive S. Jacksonville, FL 32216 (904) 739-2000 Last year the firm was listed as Reynolds, Smith & Hills Inc. Specialties include airports, offices, NASA space launch facilities and retail, educational and industrial facilities. Activity includes 35 percent commercial, 15 percent institutional and 15 percent industrial. The Leonardo da Vinci Intercontinental Airport in Rome is a recent project. <i>Kirt Gardner III, Pres., CEO</i>
2 (4) \$58.24 Hellmuth, Obata & Kassabaum Inc. 100 N. Broadway St. Louis, MO 63102 (314) 421-2000 Offices are located in Dallas, Kansas City, Los Angeles, New York, San Francisco, Tampa, Fla., Washington, D.C., and Hong Kong. A new office was recently established in London to serve the U.K. and Europe. The staff of 900 includes 220 registered architects, 11 registered mechanical engineers and eight registered electrical engineers. A subsidiary is a computer services firm, HOK/CSC. <i>Gyo Obata, Chmn., Pres.</i>	6 (6) \$48.00 RTKL Associates Inc. 400 E. Pratt St. Baltimore, MD 21202 (301) 528-8600 Activity is 80 percent commercial, 15 percent institutional and 2 percent industrial. With a total staff of 572, other offices are located in Dallas, Washington, D.C., Fort Lauderdale, Fla., and Los Angeles. Firm is expanding internationally and specializes in full-service architectural, engineering and planning services. A current project is the Manhattan Hotel in Tokyo. <i>Harold L. Adams, Chmn.</i>	9 (9) \$35.90 Howard Needles Tammen & Bergendoff P.O. Box 419299 Kansas City, MO 64141 (816) 333-4800 Firm is known for corporate and speculative office buildings, sports and convention facilities and airport terminal design. Activity is 50 percent commercial, 40 percent institutional and 10 percent industrial. Firm employs 480 in the architectural division. The expansion of the Anaheim Convention Center in California and the renovation of Fenway Park in Boston are current projects. <i>William Love, Cary C. Goodman, Ptnrs.</i>
3 (3) \$56.42 Ellerbe Becket Inc. One Appletree Square Minneapolis, MN 55425 (612) 853-2000 The merger of Ellerbe Associates Inc. and Welton Becket Associates Inc. was finalized in March 1988. Offices are in Minneapolis, Washington, D.C., and Los Angeles. Ellerbe Becket Construction Services Inc. is a subsidiary. The staff totals 843 and includes 238 registered architects. Universal Studios, an Orlando, Fla.-based theme park and film studio, is a recent project. <i>John C. Gaunt, Pres.</i>	7 (7) \$39.90 Leo A. Daly 8600 Indian Hills Drive Omaha, NE 68114 (402) 391-8111 Firm acquired the Phoenix, Ariz., office of Charles Kober Associates and founded Daly-Law Iberica S.A. in Madrid, Spain. Other subsidiaries include Leo A. Daly Pacific Ltd. in Hong Kong and Leo A. Daly Design Consultants, PTE. Ltd. in Singapore. Expertise is in international architectural, engineering and planning services. Firm has 14 offices worldwide and employs a staff of 709. <i>Leo A. Daly, Pres., CEO</i>	10 (12) \$30.00 Cannon Corp. 2710 Whitehaven Road Grand Island, NY 14072 (716) 773-6800 Activity is 59 percent institutional, 40 percent commercial and 1 percent industrial. Other offices are located in Boston, Buffalo, N.Y., St. Louis and Washington, D.C. Firm plans an increased penetration of corporate, commercial, institutional, lifecare and interiors markets. A current project is the Children's Medical Center of Israel near Tel Aviv. <i>John D. Cannon, Pres., CEO</i>
4 (5) \$54.32 HKS Inc. 111 Plaza of the Americas North Tower, LB 307 Dallas, TX 75201 (214) 969-5599 Firm formerly known as Harwood K. Smith & Partners Inc. Other offices are located in Tampa and Los Angeles. Activity is 50 percent institutional, 45 percent commercial and 5 percent industrial. Current projects include the \$140 million First Bank Place in Minneapolis and the \$250 million J.C. Penny Headquarters in Irving, Texas. <i>Ronald L. Skaggs, Chmn., CEO; C. Joe Buskuhl, Pres.</i>	 Howard Needles Tammen & Bergendoff recently completed the \$16 million Palms Springs Convention Center in Palm Springs, Calif.	

ARCHITECT/ ENGINEERS

11

(15)

\$28.00

The Kling-Lindquist Partnership
2301 Chestnut St.
Philadelphia, PA 19103
(215) 569-2900

Firm is recognized for the design and engineering of pharmaceutical research and development facilities. Marketing emphasis in 1989 will be directed toward high-tech manufacturing, including the pharmaceutical, biotechnology and electronics industries. Firm will also focus on its consulting services division to offer extensive facility management services to its clients. *Fred H. Lindquist, Chmn., CEO*

12

(11)

\$27.30

Hansen Lind Meyer Inc.
Plaza Centre One
Box 310
Iowa City, IA 52244
(319) 354-4700

Marketing emphasis is on health care, criminal justice, high-tech industrial and corporate projects. Other offices are in Chicago and Orlando, Fla. Activity was 70 percent institutional, 20 percent commercial and 10 percent industrial. Projects include the \$149 million City Hospital Center at Elmhurst in New York and the Kansas State Prison in Wichita. *John Douglas Benz, Pres.*

13

(10)

\$26.41

The Smith Group
455 W. Fort St.
Detroit, MI 48226
(313) 964-3000

Firm has several affiliates located in Washington, D.C., Phoenix, Ann Arbor, Mich., Dallas, Toronto, Ontario, and Glencoe, Ill. Activity includes 35 percent institutional, 30 percent commercial and 30 percent industrial. Firm's specialties include R&D laboratories, educational and transportation facilities, as well as manufacturing and assembly plants. *Philip J. Meathe, Chmn., CEO*

14

(23)

\$24.77

Perkins & Will
123 N. Wacker Drive
Chicago, IL 60606
(312) 977-1100

Fiscal year ended March 31, 1989. Federal, state and local government projects accounted for 24 percent of work and reconstruction accounted for 20 percent. Educational, health care, office and mixed-use projects are among building types firm emphasizes. Current projects include 100 North Riverside, an office high rise in Chicago, and the International Terminal at Chicago's O'Hare Airport. *Hans Neumann, Chmn.*

15

(21)

\$22.06

CUH2A
600 Alexander Road
CN-5240
Princeton, NJ 08543
(609) 452-1212

Firm is known for design of high-tech projects for research and development, corporate offices and computer facilities. Activity is 60 percent industrial, 30 percent commercial and 10 percent institutional. A recently completed project is the \$28 million corporate headquarters for BMW of North America Inc. in Woodcliff Lake, N.J. *Kurt M. Anderson, Pres.*

16

(13)

\$21.00

Haines, Lundberg, Waehler (HLW)
115 Fifth Ave.
New York, NY 10003
(212) 353-4600

Firm reports that work is changing from commercial office projects to R&D and government sectors of the real estate market. Among firm's specialties are corporate offices, computer and telecommunications facilities. Reconstruction accounts for 28 percent of work. Activity includes 26.5 percent commercial, 24.5 percent industrial and 17.5 percent institutional. *Martin D. Raab Sr., Managing Ptnr.*

17

(14)

\$21.00

Albert Kahn Associates Inc.
Albert Kahn Building
7430 Second Ave.
Detroit, MI 48202-2798
(313) 871-8500

Activity is 70 percent industrial, 20 percent institutional and 10 percent commercial. Reconstruction is 15 percent of work, and federal, state and local government projects are 3 percent. Staff totals 301 and includes 42 registered architects and 50 registered engineers. *E.E. Parks, Pres., CEO*

18

(26)

\$18.90

Ewing Cole
Cherry Parsky
100 N. 6th St.
Independence Mall West
Philadelphia, PA 19106
(215) 923-2020

Subsidiaries are Ewing Cole Krause and Ewing Cole Brouwer. Firm's specialties include sports facilities, R&D facilities and airports. Reconstruction projects accounted for 45 percent of all activity. Current projects include a renovation and expansion of terminal "A" at Philadelphia International Airport and the Remington Park racetrack in Oklahoma City. *Stanley M. Cole, CEO*

19

(18)

\$18.56

The Flad Companies
6200 Mineral Point Road
Madison, WI 53705
(608) 238-2661

Firm opened an office in White Plains, N.Y. Other offices are in Gainesville, Fla., Charlotte, N.C., and Milwaukee. Projects are technology-driven and include health care facilities, data centers, R&D spaces and laboratories. Activity includes 30 percent commercial, 30 percent institutional and 5 percent industrial. *J.E. Blassick, J.W. Miller, R.H. Postweiler, Principals*

20

(44)

\$18.00

Everett I. Brown Co.
950 N. Meridian
Suite 200
Indianapolis, IN 46204
(317) 237-7000

Activity is 60 percent institutional, 20 percent commercial and 20 percent industrial. Reconstruction projects accounted for 50 percent of work, and government projects accounted for 20 percent. A current project is the \$2.7 million Phi Delta Kappa National Headquarters at Indiana University in Bloomington. The project is scheduled for completion this September. *Joseph S. Brown, Managing Ptnr.*

21

(25)

\$17.92

Sasaki Associates Inc.
64 Pleasant St.
Watertown, MA 02172
(617) 926-3300

The trend toward international work led to an affiliation with Suter + Suter to serve clients overseas. A new office in Washington, D.C., also was opened. The firm's specialty is planning, architecture and site design for colleges, universities and athletic facilities. Activity includes 40 percent institutional and 35 percent commercial. Staff totals 288. *James A. Sukeforth, Pres.*

22

(29)

\$17.50

Burt Hill Kosar Rittelmann Associates
125 S. Ninth St.
Philadelphia, PA 19107
(412) 285-4761

Historic restoration is firm's specialty, along with commercial mixed-use, health care and educational facilities. Reconstruction accounts for 45 percent of work. The John Wanamaker Building in Philadelphia is an ongoing historic restoration project that will be complete in 1990. Activity is 55 percent commercial and 35 percent institutional. *Ralph Burt, Chmn.; John Kosar, Pres.*

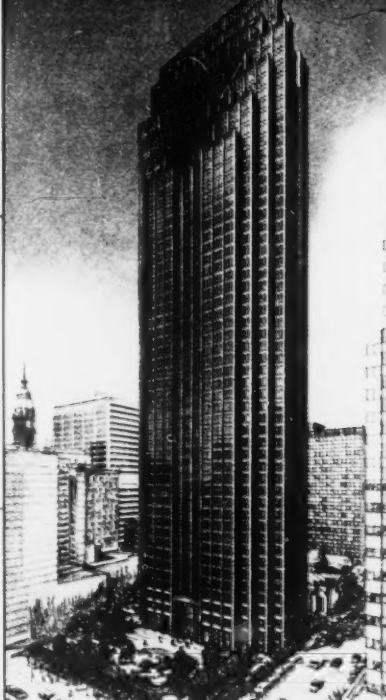
23

(22)

\$16.28

Gresham, Smith and Partners
3310 West End Ave.
Nashville, TN 37203
(615) 385-3310

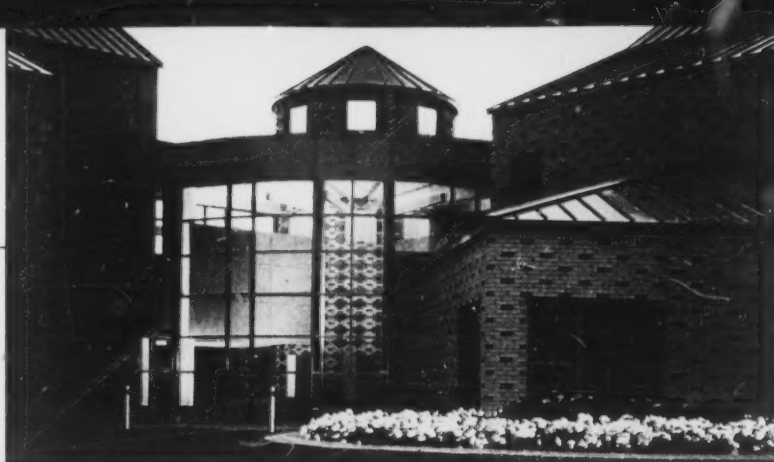
Firm opened new branch offices in Huntsville and Birmingham, Ala. Health care planning and design, with emphases on teaching, pediatric and outpatient facilities, is a specialty. Activity includes 56 percent institutional, 27 percent commercial and 2 percent industrial. Firm is currently working on Erlanger Ancillary East Hospital in Chattanooga, Tenn. *Fleming W. Smith, Founding Ptnr.*



Philadelphia's Bell Atlantic Tower was designed by the Kling-Lindquist Partnership.

24(30)
\$15.68**Anderson DeBartolo
Pan Inc.**
2480 N. Arcadia
Tucson, AZ 85712
(602) 795-4500

Fiscal year ended Aug. 31, 1988. Firm expanded construction services to include program and construction management. A new office was established in San Francisco. An advanced materials research lab at Stanford University is a current project and will be complete in 1990. Activity is 55 percent institutional, 40 percent industrial and 5 percent commercial. *Richard L. Anderson, Prin.*



Hammel Green and Abrahamson designed the \$8 million Northern Crop Science Lab at North Dakota State University in Fargo. Photo: Tom Halvaty

25(24)
\$15.68**Albert C. Martin
Associates**
811 W. 7th St.
Los Angeles, CA 90017
(213) 683-1900

Other offices are located in Irvine, Calif., and Tokyo. Firm was restructured into 25 different sectors, so clients may purchase specific services for their projects. The strategy has enabled ACMA to market engineering services separately from core A/E business. Firm is known for mixed-use, college/university and institutional facilities. *Albert C. Martin, Prin.*

29(45)
\$13.50**John Portman
& Associates**
231 Peachtree St., N.E.
Suite 200
Atlanta, GA 30303
(404) 522-8811

Subsidiaries include Portman Barry Investments and Portman Properties, both in Atlanta. Firm is known for hotels, offices and mixed-use developments. A staff totaling 115 includes 35 registered architects and seven engineers. Activity is 95 percent commercial and 5 percent institutional. Reconstruction was only 2 percent of all activity. *John Portman Jr., Pres.*

33(34)
\$12.15**TRA**
215 Columbia
Seattle, WA 98104
(206) 682-1133

Major offices in Seattle, Anchorage, Boston and Denver. Firm specializes in large and multidisciplinary projects such as airport facilities and convention centers. A current project is the \$400 million Fred Hutchinson Cancer Research center in Seattle and the King County Aquatic Facility in King County, Wash. *Allen Moses, Prin., Admin. Dir.*

26(38)
\$14.43**Spillis Candela
& Partners Inc.**
800 Douglas Entrance
Coral Gables, FL 33134
(305) 444-4691

Firm acquired the Washington, D.C., office of architect John Carl Warnecke, which now is called Spillis Candela/Warnecke. Due to this acquisition and growth in other offices, firm's staff increased by 26 percent last year. Activity is 57 percent commercial and 43 percent institutional. Reconstruction projects accounted for 35 percent of business and government projects also accounted for 35 percent. *Peter J. Spillis, CEO.*

30(20)
\$12.65**DLR Group**
400 Essex Court
Regency Park
Omaha, NE 68114
(402) 393-4100

Fiscal year ended August 1988. This employee-owned firm has four subsidiaries: Dana Larson Roubal and Associates, Lescher Mahoney, John Graham Associates and Deseret. Specialties include criminal justice, educational and medical facilities and shopping centers and office buildings. Work is 75 percent government and 20 percent reconstruction. *Dale Hallock, Bryce Pearsall, Managing Principals.*

34(27)
\$11.56**GSGSB
Berens Building**
P.O. Box 244
Clarks Summit, PA 18411
(800) 544-7472

Firm acquired B. Eichwald & Co. Inc. of New York City. Another subsidiary is GSGSB/Horst Design, an interior design firm in Port Washington, N.Y. Other offices are in Fairfield, N.J., and Research Triangle Park, N.C. Firm's specialties include high-tech projects, computer centers and retail malls. Staff totals 220 and includes 23 architects and 15 engineers. *J.P. Gilboy, Chmn.*

27(32)
\$13.70**Rosser Fabrap
International**
524 W. Peachtree, N.E.
Atlanta, GA 30308
(404) 876-3800

Other offices are located in Tampa, Fla., Savannah, Ga., and San Bernardino, Calif. Firm's specialties are in sports facilities, criminal justice complexes, office and aviation buildings. Activity is 60 percent institutional, 30 percent commercial and 10 percent industrial. Government projects accounted for 52 percent of work and 10 percent was reconstruction. *Paul C. Rosser, CEO, Edward W. Davidson Jr., Pres.*

31(33)
\$12.55**Harley Ellington
Pierce Yee Associates**
26913 Northwestern
Highway, Suite 200
P.O. Box 5030
Southfield, MI 48086
(313) 262-1500

Affiliates include Kasch Dukes/HEPY P.C., Fields & Silverman/HEPY, Burke & Bales/HEPY Inc. and Pierce Yee Associates Ltd. Firm reorganized its marketing efforts, concentrating on corporate, university, government, health care and industrial facilities. *Ralph Pierce, Pres.*

35(42)
\$11.00**Setter, Leach
& Lindstrom**
1011 Nicollet Mall
Minneapolis, MN 55403
(612) 338-8741

Staff includes 23 registered architects and 25 engineers. Activity includes 45 percent commercial, 35 percent industrial and 20 percent institutional. Reconstruction was 25 percent of work while government projects accounted for 20 percent. Firm is the managing firm for the 780,000-sq.-ft. Minneapolis Convention Center that is scheduled to be complete in May 1991. *Richard Vasatka, Pres.*

28(28)
\$13.50**Hammel Green
and Abrahamson Inc.**
1201 Harmon Place
Minneapolis, MN 55402
(612) 332-3944

This employee-owned firm specializes in educational, medical and office facilities. Activity is 47 percent institutional, 20 percent commercial, 15 percent industrial and 18 percent museums and interior design. Staff totals 218 and includes 58 registered architects. *Curtis Green, Chmn.*

32(19)
\$12.42**Heery International Inc.**
999 Peachtree St., N.E.
Atlanta, GA 30367-5401
(404) 881-9880

Correctional facilities, health care and sports facilities and commercial and institutional projects comprise firm's primary workload. Growth areas include strategic facilities planning and corporate interiors. Major offices are in Baltimore, Los Angeles and London. A project currently in design is a baseball stadium at the University of Alabama in Tuscaloosa. *James J. Moynihan, Pres., CEO.*

36(35)
\$10.81**Odell Associates Inc.**
Two Shelter Centre
75 Beattie Place
Greenville, SC 29601
(803) 235-6600

Firm designs high-rise, mixed-use developments, hospitals, airports, corporate headquarters, research laboratories and sports and convention centers. Other offices are located in Richmond, Va., Charlotte, N.C., and Tampa, Fla. Firm is expanding CADD capabilities and is developing a computerized strategic facilities planning service. Revenues are expected to increase by 15 percent in 1989. *Benjamin T. Rook, Chmn., CEO.*

ARCHITECT/ENGINEERS

37 (37) \$10.74 Page, Sutherland & Page P.O. Box 2004 Austin, TX 78768 (512) 472-6721 Firm's specialties include hospitals, schools, high-tech and commercial work. Other Texas offices are in Dallas, Fort Worth and Houston. Activity includes 79 percent institutional, 8 percent commercial and 8 percent industrial. Government projects comprised 18.5 percent of work and reconstruction accounted for 15 percent. <i>Matthew F. Kreisle III, G. Wayne Dykes, Prin.</i>	42 (46) \$9.60 The Wallinger Co. Independent Square West Philadelphia, PA 19103 (215) 592-0900 Firm's areas of expertise include R&D facilities, health care projects, conference centers, office complexes and interior design. Firm has expanded its CADD system and has gained flexibility through microstations. Its interior design and facilities programming businesses have also grown. Firm is employee-owned and its staff numbers 130. <i>William Gustafson, Pres.</i>	46 (47) \$9.00 Holabird & Root 300 W. Adams St. Chicago, IL 60606 (312) 726-5960 Reconstruction projects account for 20 percent of the firm's work; federal, state and local government projects account for 10 percent. Staff totals 135 including 30 registered architects and 10 engineers. Current projects include a \$45 million remodeling of the State of Illinois Center in Chicago and the BetaWest/Northwestern Bell Data Center in Omaha, Neb. <i>Eugene E. Cook, Managing Sr. Ptnr.</i>
38 (31) \$10.47 Stevens & Wilkinson Inc. 100 Peachtree St., N.W. Suite 2450 Atlanta, GA 30303 (404) 522-8888 Fiscal year ended May 31, 1988. Firm is known for correctional, educational and health care facilities as well as office buildings and interior design. Activity is 55 percent institutional, 35 percent commercial, 5 percent industrial and 5 percent interior design. Marlboro Correctional Facility in Marlboro County, S.C., is a current project. <i>James F. Kortan, Pres.</i>	43 (48) \$9.50 Vitetta Group The Wallace Building 642 N. Broad St. Philadelphia, PA 19130 (215) 235-3500 Firm specializes in the design of educational, health care, justice and commercial facilities, as well as in historic preservation projects. Another office is located in Camden, N.J. Activity is 65 percent institutional, 25 percent historic preservation and restoration and 10 percent commercial. Government projects accounted for 70 percent of activity. <i>Francis G. Vitetta, Pres.</i>	47 (—) \$8.80 O'Brien/Atkins Associates P.O. Box 12037 Research Triangle Park, NC 27709 (919) 941-9000 Firm is a new addition to this year's listing. Activity is 65 percent commercial, 22 percent institutional and 10 percent industrial. Federal, state and government projects account for 50 percent of activity; reconstruction accounts for 5 percent. A current project is the \$27.2 million North Carolina Museum of History in Raleigh, N.C. <i>William L. O'Brien Jr., Chmn., CEO</i>
39 (—) \$10.21 Pierce Goodwin Alexander & Linville 800 Bering Drive, Suite 100 Houston, TX 77057 (713) 977-5777 Firm is new addition to the listing this year. In the past year the firm acquired Prime Design of Tampa, Fla., and EDI Architects of Dallas. Among firm's specialties are corporate and commercial architecture, interior design, aviation projects and correctional facilities. Government projects accounted for 42 percent of activity. Revenues are expected to increase by 10 percent in 1989. <i>Earle S. Alexander Jr., Chmn.</i>	44 (16) \$9.24 3D/International 1900 West Loop South Suite 600 Houston, TX 77027 (713) 871-7000 Fiscal year ended June 30, 1988. Major offices are in Los Angeles, San Antonio, Texas, Phoenix, Ariz., Sacramento, Calif., Alexandria, Va., Dayton, Ohio, Seattle, Hong Kong, London, and Riyadh, Saudi Arabia. Specialties include office buildings, medical facilities, interior design and defense facilities. A recent project is the \$195 million Veterans Administration Medical Center in Houston. <i>J. Victor Neuhaus III, Chmn., CEO</i>	48 (41) \$8.74 Einhorn Yaffee Prescott Broadway at Beaver Albany, NY 12207 (518) 463-2141 Firm is best-known for historic preservation, renovation and adaptive reuse projects. Staff of 142 includes 25 architects, five mechanical engineers and two electrical engineers. Activity includes 55 percent institutional, 34 percent commercial and 10 percent industrial. Reconstruction accounted for 70 percent of all activity. <i>Steven L. Einhorn, Pres., Eric C. Yaffee, Exec. VP, Andrew W. Prescott, VP</i>
40 (40) \$9.93 Russell Gibson von Dohlen 281 Farmington Ave. Box H Farmington, CT 06032 (203) 677-8556 In the past year, a new research and development department was established. Firm's major emphasis is on corporate facilities, life and health care projects and interior space planning. A current project is the restoration of Christ Church Cathedral in Hartford, Conn. Government buildings accounted for 5 percent of all activity. <i>Robert J. von Dohlen, Chmn.</i>	45 (39) \$9.23 HTB Inc. 1411 Classen Blvd. Oklahoma City, OK 73106 (405) 525-7451 Firm provides design, engineering and planning services for aviation, educational and medical facilities, as well as office buildings and industrial and manufacturing plants. Other offices are located in Tulsa, Okla., Washington, D.C., and San Jose, Calif. A new terminal at the San Jose International Airport is a current project that will be completed in 1991. <i>Rex M. Ball, Chmn., CEO, P.G. Wilson Jr., Exec. VP</i>	49 (43) \$8.43 Ellis/Naeyaert Genheimer Associates Inc. 3290 W. Big Beaver Road Troy, MI 48064 (313) 649-2000 Firm acquired Six Associates Inc., an architectural, engineering and planning firm in Asheville, N.C. Reconstruction projects accounted for 52 percent of work and government work accounted for 17 percent. Marketing emphasis is on research laboratories and computer facilities for corporate and industrial clients and recreational facilities for institutional clients. <i>J. Edward Genheimer, Pres., CEO</i>
41 (50) \$9.92 Neptune & Thomas Associates 1550 W. Colorado Blvd. Pasadena, CA 91105 (213) 255-1401 Firm specializes in health care, educational and institutional projects. Activity is 76 percent institutional and 24 percent commercial. A current project is a Visual Arts Center at Pepperdine University in Malibu, Calif. The building will include classrooms, offices, art facilities and a 125-seat recital/lecture hall. <i>Anthony O. Keele, Pres.</i>	An addition at St. Michael's College in Winooski, Vt., was designed by Russell Gibson von Dohlen. 	

ARCHITECT/ENGINEERS

As competition becomes fiercer, many firms are improving marketing efforts — focusing on specialties and on expanding services.

57

(—)
\$7.20

Boyd/Sobieray Associates Inc.
6810 N. Shadeland Ave.
Indianapolis, IN 46220
(317) 849-7878

Firm is a new listing this year. Fiscal year ended Dec. 31, 1988. Another office is located in Charleston, W. Va. Marketing emphasis is on health care and medical and scientific research facilities, but more emphasis will be placed on renovation projects. Activity is 100 percent institutional and 65 percent of all activity is reconstruction. Government projects accounted for 12 percent of work. *Donald B. Altemeyer, Pres.*

50

(—)
\$7.80

Musil Perkowitz Ruth Inc.
911 Studebaker Road
Long Beach, CA 90815
(213) 594-9333

Firm is a new addition to the listing this year. MPR was established in 1979 and does work primarily in California. Firm's specialty is shopping centers — retail planning, design and renovation. Revenues are expected to increase in 1989 and firm plans to expand the current staff of 98 to 140. Growth is also anticipated in California and in certain areas across the country. *M. Lawrence Musil, Sy Perkowitz, Steven Ruth, Ptnrs*

54

(52)
\$6.96

KZF Inc.
655 Eden Park Drive
Cincinnati, OH 45202
(513) 621-6211

KZF is organized into nine divisions, including commercial development, interiors, technical facilities and health care. Other offices are in Edgewood, Ky., and Lawrenceburg, Ind. Staff of 142 includes 30 registered architects and 15 registered engineers. Two Ohio projects are the Warren Correctional Institution and the St. Luke Center, a nursing home expansion. *Frederic C. Weckel, Pres., CEO*

58

(—)
\$6.07

Fred H. Thomas Associates
2650 N. Triphammer Road
Ithaca, NY 14850
(607) 257-1300

Firm is new addition to the listing this year. Other offices are located in Princeton, N.J., and Garden City, N.Y. Specialty is in the design of educational facilities; activity is 100 percent institutional. Reconstruction accounted for 60 percent of activity and government projects accounted for only 2 percent. Staff totals 111 and includes 24 registered architects and eight engineers. *Fred H. Thomas, Pres.*

51

(56)
\$7.46

Fletcher-Thompson Inc.
299 Washington Ave.
Bridgeport, CT 06604
(203) 355-5441

Firm opened a new office in Hartford, Conn. Among firm's specialties are corporate facilities, offices, hotels and government and institutional buildings. A current project is a 500-bed medium-security prison and a 300-bed intake classification center for the state of Connecticut. Firm anticipates revenues to increase by 8 percent in 1989. *John G. Phelan, Pres., Michael L. Donegan, Exec. VP*

55

(55)
\$5.50

BSHA Inc.
919 4th Ave.
San Diego, CA 92101
(619) 239-2353

This employee-owned firm's fiscal year ended June 1988. Another office is located in Colorado Springs, Colo. Specialties include mixed-use urban developments, high-tech laboratory facilities, sports facilities and R&D parks. Activity is 50 percent commercial, 40 percent institutional and 10 percent industrial. Reconstruction accounts for 10 percent of activity; government work accounts for 5 percent. *Gordon Carrier, Pres.*

59

(53)
\$5.70

Kenneth Balk & Associates Inc.
1066 Executive Parkway
P.O. Box 27338
St. Louis, MO 63141-6304
(314) 576-2021

Another office is in Houston. Recent projects include the expansion and remodeling of May D & F department store in Boulder, Colo., and the remodeling of a McDonnell Douglas test facility in St. Louis. Specialties include shopping malls, retail stores and government structures. Activity is 55 percent commercial, 25 percent industrial and 15 percent institutional. *Kenneth Balk, CEO*

52

(—)
\$7.42

Rogers, Burgun Shahine & Deschler
215 Park Ave. South
New York, NY 10003
(212) 614-0788

Firm is a new addition to this year's listing. Specialties include medical, educational and corporate facilities. Activity is 70 percent institutional and 30 percent commercial. Reconstruction projects were 68 percent of all activity and government projects accounted for 6 percent. Recently completed projects include the Bronx County Courthouse and the Morgan Bank, both in New York. *Arthur J. Blume, Pres.*

56

(54)
\$6.30

Lorenz & Williams
120 W. Third St.
Dayton, OH 45402
(513) 223-6500

A real estate development subsidiary is LW Development Co. of Dayton, Ohio. Activity includes 42 percent commercial, 30 percent institutional, 17 percent industrial and 11 percent interior design. Reconstruction projects account for 4 percent of activity. Current projects include a restoration of the Victoria Theatre in Dayton and the \$15.6 million St. Elizabeth Medical Center. *A. Notley Alford, Pres., CEO*

60

(58)
\$5.42

Fanning/Howey Associates Inc.
540 E. Market
P.O. Box 71
Celina, OH 45822
(419) 586-7771

Design of educational, health care and industrial projects are among firm's specialties. Other offices are located in Columbus, Ohio, West Palm Beach, Fla., Indianapolis and Michigan City, Ind. Staff totals 109 and includes 28 registered architects and six engineers. Activity is 98 percent institutional, 1 percent commercial and 1 percent industrial. *Ronald H. Fanning, Pres.*

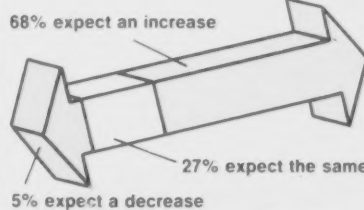
53

(57)
\$7.35

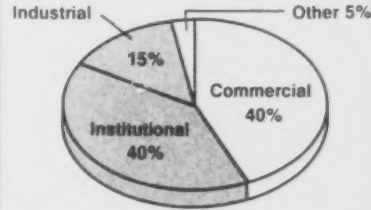
Phillips Swager Associates Inc.
3622 N. Knoxville
Peoria, IL 61603
(309) 688-9511

Major offices also located in Naperville, Ill., and Dallas. Among the firm's marketing emphases are correctional institutions and health care and educational facilities. Activity is 66 percent institutional, 20 percent industrial and 14 percent commercial. One half of all activity was government work and 20 percent was reconstruction. *Eugene C. Swager, Pres.*

What is the Architect/Engineers' Outlook for Revenues in 1989?



Breakdown of the Architect/Engineers' Billings



ENGINEER/ ARCHITECTS

ENGINEER/ARCHITECTS BOAST LARGEST INCREASE IN BILLINGS

Expanded services contributed to a 22 percent increase, the largest of any group in the survey

1

(3)

\$224.60

CRS Sirrinc Inc.
1177 West Loop South
Houston, TX 77027
(713) 552-2000

This publicly held firm with a staff of 3,100 is best-known for educational, health care, correctional, industrial and R&D facilities. Work under way includes renovation and new construction of educational facilities under a \$1.5 billion bond program in Dade County, Fla., and interior design of IBM's Westlake facility near Dallas. *Bruce W. Wilkinson, Pres., CEO*

2

(1)

\$143.21

Sverdrup Corp.
801 North 11th St.
St. Louis, MO 63101
(314) 436-7600

Sverdrup operates 20 offices in the U.S. One-half of this firm's work involves various public projects. Current projects include airport improvements for Delta Airlines at Dallas-Fort Worth Airport, design of \$60 million aviation facilities at Fort Drum, N.Y., and a 96,000-sq.-ft. science complex in St. Louis for the University of Missouri. *B.R. Smith Jr., Chmn., CEO*

3

(2)

\$138.00

Holmes & Narver Inc.
999 Town & Country Road
Orange, CA 92688
(714) 567-2400

During the past year Holmes & Narver has broadened its marketing emphasis into the food and beverage industry and into state and local agencies. The firm is best-known for computing centers, processing facilities, flight simulators and other training facilities, labs and communication facilities, as well as office buildings. Reconstruction projects accounted for some 45 percent of the firm's work. *Forrest C. Six, Pres.*

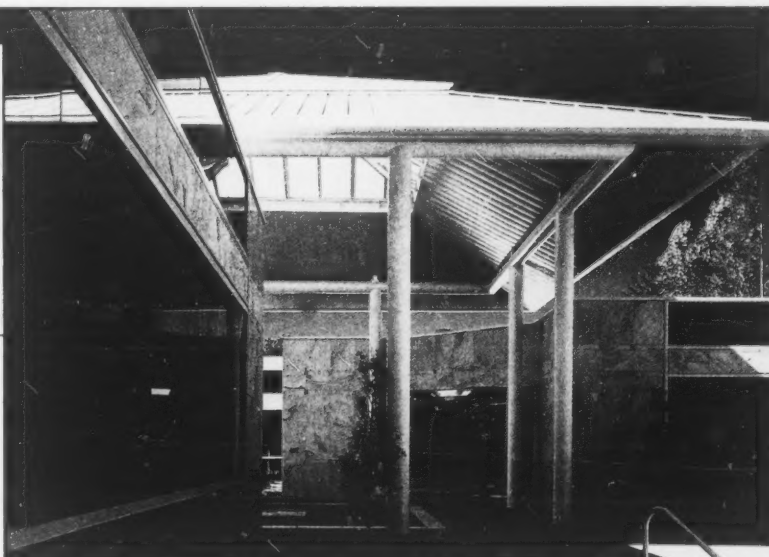
4

(5)

\$85.20

Lockwood Greene Engineers
Box 491
Spartanburg, SC 29304
(803) 578-2000

During the past year the firm opened branch offices in Nashville, Tenn., Tulsa, Okla., and Union, N.J. The firm's emphasis is on projects for the food and beverage, pharmaceutical, biotechnology, electronics, chemical, aerospace, defense and printing industries. Specialties include facility automation, physical security and renovation/adaptive reuse. *Donald R. Luger, CEO*



Lockwood Greene was the lead designer for the Barrett Office Center, the corporate headquarters of Georgia Marble in Cobb County, Ga. Photo: Ron Rizzo

5

(4)

\$73.15

Daniel, Mann, Johnson & Mendenhall (DMJM)
3250 Wilshire Blvd.
Los Angeles, CA 90010
(213) 381-3663

Staff of 1,500 includes 163 registered architects, 55 structural engineers and 48 mechanical engineers. Among projects scheduled for completion this year are a medical facility in Los Angeles for UCLA, a Marriott hotel in San Francisco, jails in Richmond, Va., and Renaissance Tower, a \$66 million office tower in Sacramento. Forty percent of the firm's work involves public projects. *M. Paul Brott, Pres.*

7

(9)

\$42.75

A. Epstein and Sons Inc.
600 Fulton St.
Chicago, IL 60606
(312) 454-9100

The firm's emphasis is on facilities for the food industry, including offices, research facilities, processing plants and warehouse/distribution centers, as well as hospitals, multifamily housing, hotels and corporate headquarters. Staff of 570 employees includes 75 registered architects, 25 structural engineers and 35 mechanical engineers. *George Callas, Pres.*

6

(7)

\$54.60

Day & Zimmermann Inc.
1818 Market St.
Philadelphia, PA 19103
(215) 299-8000

The firm is known for its biotechnology and pharmaceutical facilities, food plants, schools and semiconductor facilities. Current projects include a manufacturing plant for Xerox in Webster, N.Y., a bakery for Pepperidge Farm in Downingtown, Pa., a semiconductor manufacturing facility in Eden Prairie, Minn., and a cell culture manufacturing facility in Berkeley, Calif. Firm estimates a 10 percent increase in revenues for the current year. *H.L. Yoh Jr., Chmn.*

8

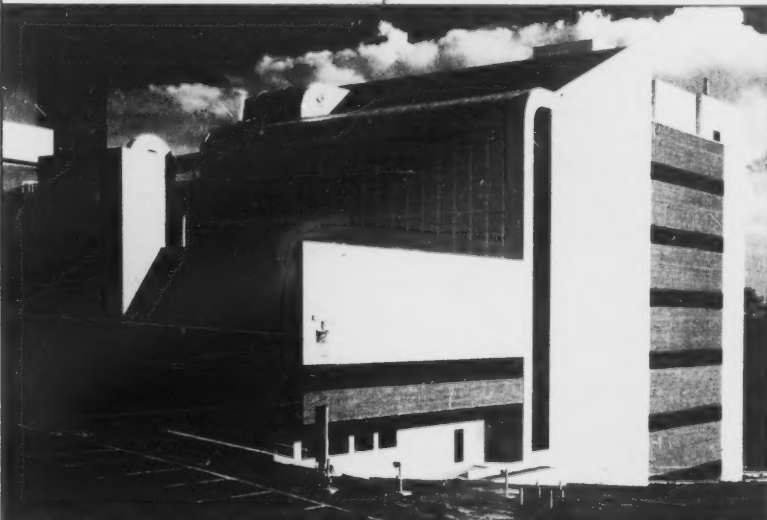
(11)

\$41.60

Chas. T. Main Inc.
Prudential Center
Boston, MA 02199
(617) 859-2000

The firm's primary industrial markets are electronics, printing, defense, pulp and paper, light and heavy manufacturing. The firm is employee-owned. Under way are newspaper production plants in Maryland, Virginia, New Jersey and California. Main's parent firm is Parsons Corp. The firm operates overseas offices in Pakistan, Saudi Arabia, Kuwait, Nigeria and Nepal. *James T. Callahan, Pres.*

ENGINEER/ARCHITECTS

9 (12) \$40.74 SSOE Inc. 1001 Madison Ave. Toledo, OH 43624 (419) 255-3830 This privately held firm is best-known for industrial and automotive facilities, health care projects, educational facilities and facility management. Branch offices are located in Flint, Mich., and Nashville, Tenn. Organizational changes during the past year included the expansion of the Nashville office with the addition of civil/structural, HVAC, electrical and architecture departments. <i>Raman K. Patel, Pres., CEO</i>	12 (14) \$32.66 STV Engineers Inc. 11 Robinson St. Pottstown, PA 19464 (215) 326-4600 STV Engineers includes STV/Lyon Associates, STV/H.D. Nottingham, STV/Sanders & Thomas, STV/Seelye Stevenson Value & Knecht and STV/Michael Lynn & Associates. This publicly held firm is known for labs, transportation, waste-to-energy, industrial, process, defense and commercial projects. Last year the firm completed a 95,000-sq.-ft. virology lab for the Centers for Disease Control in Atlanta. <i>Richard L. Holland, Chmn., CEO; Michael Haratunian, Pres., COO</i>	14 (—) \$28.93 Black & Veatch 1500 Meadow Lake Parkway Kansas City, MO 64114 (913) 339-2000 During the past year Black & Veatch announced a major reorganization, one result of which was the forming of a separate subsidiary, Black & Veatch Architects, to provide architectural services. Because of the greater emphasis on architecture, the firm is listed this year in the Engineer/Architects category, whereas last year the firm was ranked 6th in the Engineers category. <i>John H. Robinson, Managing Ptnr.</i>
10 (8) \$40.00 Belcan Corp. 10200 Anderson Way Cincinnati, OH 45242 (513) 891-0972 Belcan's emphasis is on automated manufacturing and warehousing facilities with related offices, labs and computer facilities. Ninety-seven percent of the firm's billings are derived from various industrial projects. Recently completed projects include an infant formula plant expansion in Columbus, Ohio, and a cereal plant expansion in Cincinnati. <i>Ralph G. Anderson, Pres.</i>	<i>Many of the Engineer/Architects reported an increased emphasis on facilities for the food and beverage industry.</i>	
11 (13) \$38.65 Dewberry & Davis 8401 Arlington Blvd. Fairfax, VA 22031 (703) 849-0100 Dewberry & Davis is a full-service architectural, engineering and planning firm. Commercial buildings accounted for 32 percent of billings, institutional for 8 percent and industrial for 5 percent. Among major projects are a number of office buildings in Washington, D.C., and Virginia, and the 1.8 million-sq.-ft. Franklin Mills Mall in Philadelphia, the country's largest single-story mall. <i>Sidney O. Dewberry, Managing Ptnr.; Barry K. Dewberry, General Ptnr.</i>	13 (6) \$29.67 URS Consultants 150 Fourth St. San Francisco, CA 94103 (415) 957-5300 Institutional buildings accounted for 26 percent of total design and planning billings of \$69 million, industrial buildings for 10 percent and commercial for 7 percent. URS has recently begun to focus more attention on such high-growth markets as Virginia Beach, Columbus, Ohio, and Southern California. Among the firm's many health care projects is a new facility for Walter Reed Army Medical Center in Washington, D.C. <i>Irwin L. Rosenstein, CEO</i>	15 (10) \$25.76 Giffels Associates Inc. P.O. Box 5025 Southfield, MI 48086 (313) 355-4600 Giffels is best-known for industrial, manufacturing and R&D projects as well as clean room and industrial engineering specialties. Projects under way include the \$200 million Chrysler Technology Center in Auburn Hills, Mich., and the 1 million-sq.-ft. Ford truck assembly plant in Avon, Ohio. The firm expects billings to increase by 25 percent in 1989. Staff numbers 514. <i>Arthur O. Moran Jr., Chmn.</i>
 STV Engineers provided engineering and architecture for the Centers for Disease Control's new \$21 million virology lab in Atlanta. Photo: David Dobbs		16 (17) \$23.10 The Benham Group 9400 N. Broadway Oklahoma City, OK 73156 (405) 478-5353 In building construction, the firm's emphasis is on industrial plants, R&D, medical facilities and offices. Staff numbers 498, including 51 registered architects, 40 structural engineers and 38 mechanical engineers. The firm is privately held. Among current projects is a \$31 million training facility for the FAA in Oklahoma City. <i>David B. Benham, CEO</i> 17 (16) \$22.69 Greiner Engineering Inc. 909 E. Las Colinas Blvd. Suite 1900, LB 44 Irving, TX 75039 (214) 869-1001 The staff of this publicly held firm numbers 1,246. In building construction the firm is best known for educational, health care, commercial and industrial projects. Recent projects include a terminal expansion at Tampa International Airport and school expansions in Michigan and Indiana. Revenues are expected to be up 8 percent in 1989. <i>Frank T. Callahan, Pres., CEO</i>

18**(15)**
\$21.60**Lester B. Knight
& Associates Inc.**
549 W. Randolph St.
Chicago, IL 60606
(312) 346-2100

The firm's emphasis is on advanced technology, R&D, industrial and manufacturing facilities and military projects. Current projects include microelectronics manufacturing facilities in Virginia and Vermont. Staff of 540 employees includes 40 registered architects, 35 structural engineers and 70 mechanical engineers. Lester B. Knight is employee-owned. *DeForest Davis Jr., Pres.*

19**(19)**
\$17.46**Bernard Johnson
Incorporated**
5050 Westheimer
Houston, TX 77056
(713) 622-1400

During the past year the firm made two Dallas-based acquisitions, Bernard Johnson/Taylor/Hewlett Inc. (architects/interior designers) and Counsel Corp. (bank planners). This privately held firm is best-known for research and technical buildings, airport terminals and owner-occupied facilities. *Bernard G. Johnson, Chmn., CEO*



Nashville-based Barge, Waggoner, Sumner & Cannon completed the Spring Hill (Tenn.) City Hall in 1988. The employee-owned firm was founded in 1955.

20**(18)**
\$17.10**Gee & Jenson**
P.O. Box 24600
West Palm Beach, FL 33416
(407) 683-3301

In addition to its West Palm Beach headquarters, Gee & Jenson operates Florida offices in Bradenton, Coral Springs, Fort Myers, Tampa, Jacksonville, Orlando, Stuart and Titusville. The staff of this privately held firm numbers 302. Recently completed work includes public libraries in DeLand and Fort Lauderdale, Fla. *Fred A. Greene, Chmn., CEO; Richard M. Miller, Pres., COO*

23**(29)**
\$13.00**The Sigel Group**
Sabine & Essex Avenues
Narberth, PA 19072
(215) 839-3200

The Sigel Group specializes in pharmaceutical and electronic manufacturing facilities, R&D buildings, university and corporate labs and research facilities, and media/studio facilities. The privately held firm has a staff numbering 200. Mechanical/electrical engineering accounted for 75 percent of billings. *John K. Henderson, Chmn.; G. William Leishear, Pres.*

26**(20)**
\$12.08**Post, Buckley, Schuh &
Jernigan Inc.**
8600 N.W. 36th St.
Miami, FL 33166
(305) 592-7275

This employee-owned firm operates 36 offices nationwide. Current commercial projects include business parks in Miami and Pinellas County, Fla., and a 10-story hotel in Key Biscayne. Public-sector projects accounted for 67 percent of the firm's work. *William Randolph, Chmn.; Jim Glass, Pres.; Phillip Searcy, Exec. VP*

21**(26)**
\$14.00**Barge, Waggoner, Sumner
& Cannon**
162 Third Ave. North
Nashville, TN 37201
(615) 254-1500

This employee-owned firm has a staff of 395 employees located in six Tennessee-based offices and an office in Huntsville, Ala. Public projects accounted for 40 percent of the firm's work. Major projects under way include improvements at Memphis International Airport and a trailer manufacturing facility in Scott County, Tenn., for Fruehauf Corp. *William H. Cannon, Chmn.; Jack L. Wood, Pres.*

24**(28)**
\$12.96**Wiss, Janney, Elstner
Associates Inc.**
330 Pfingsten Road
Northbrook, IL 60062
(312) 272-7400

The firm is now employee-owned, having completed a purchase agreement with former owner USG Corp. Wiss, Janney, Elstner provides a range of consulting and research services in all areas of construction technology. Recent projects include the \$80 million facade replacement of Chicago's Amoco tower, and facade restoration of Lincoln Center in New York City. *John M. Hanson, Pres.*

27**(25)**
\$11.80**Lev Zetlin Associates**
641 Avenue of the
Americas
New York, NY 10011
(212) 741-1300

Lev Zetlin's specialties include commercial labs, industrial facilities, distribution centers/warehouses, airport terminals and hangars. Structural engineering services accounted for 37 percent of billings, architectural services for 30 percent and mechanical/electrical engineering for 25 percent. *Charles H. Thornton, Pres.; Richard L. Tomasetti, Sr. VP*

22**(27)**
\$13.75**Mason & Hanger-Silas
Mason Co. Inc.**
2355 Harrodsburg Road
Lexington, KY 40504
(606) 252-4421

The firm is best-known for security facilities, weapons processing and ammunition plants, and blast-resistant structures. Government projects accounted for 88 percent of the firm's work. *Dwight E. Heffebower, Pres.*

25**(21)**
\$12.24**Hayes, Seay, Mattern &
Mattern Inc.**
P.O. Box 13446
Roanoke, VA 24034
(703) 857-3100

The firm is known for large renovation projects and specialized industrial projects, including explosives facilities, research labs and health care. The privately held firm has recently begun to emphasize interior design and parking structure design. Staff of 306 includes 22 registered architects, 26 structural engineers and 16 mechanical engineers. *H. Boyd Dickenson, CEO; T. Howard Noel, Pres.*

28**(—)**
\$11.30**Ghafari Associates Inc.**
14147 Farmington Road
Livonia, MI 48154
(313) 421-3900

The firm is best-known for automotive-related industrial facilities. The firm's marketing emphasis is broadening, however, to include nonautomotive industries and the public sector. In addition to the Livonia, Mich., headquarters, the firm operates offices in Detroit and Indianapolis. Staff numbers 165 employees. *Yousif B. Ghafari, Pres.*

ENGINEER/ARCHITECTS

29

(24)

\$10.92

A.M. Kinney Inc. & Affiliates
2900 Vernon Place
Cincinnati, OH 45219
(513) 281-2900

Kinney is best-known for R&D labs, corporate headquarters and other offices, and manufacturing and distribution centers for the pharmaceutical, food, specialty and fine chemicals, and electronic industries. Current projects include facilities for Miles Laboratories in Elkhart, Ind., and Dayton, Ohio, and a pharmaceutical manufacturing facility in Norwich, N.Y., for Procter & Gamble. *A.M. Kinney Jr., Chmn.*

31

(—)

\$10.50

McFarland-Johnson Engineers Inc.
171 Front St.
Binghamton, NY 13905
(607) 723-9421

The firm operates four offices in New York state as well as one office each in Illinois, California, Maryland and New Jersey. Staff includes 196 employees. Projects under way include lab renovations at Cornell University in Ithaca, N.Y., and expansion of the Elmira-Corning Airport in Horseheads, N.Y. *Thomas S. Coughlin, Pres., CEO*

36

(37)

\$9.00

Donohue
4738 North 40th St.
Sheboygan, WI 53803
(414) 458-8711

C.I.I. billings reported above represent 20 percent of Donohue's total design and planning revenues of \$45 million for 1988. An ongoing project is the adaptation of Courtyard by Marriott hotel prototypes to specific sites with the assistance of CADD. The public sector accounted for 65 percent of the firm's work. *Keith J. Garnett, CEO*

32

(—)

\$10.00

Rose, Beaton & Rose/Rose Engineers
81 Main St.
White Plains, NY 10601
(914) 682-4850

The firm's emphasis is on various technical facilities including computer centers, labs, telephone equipment buildings and high-security facilities. A branch office is located in Armonk, N.Y. Rose Engineers was formerly known as Rose, Chulkoff & Rose. *Daniel Beaton, William Rose Jr., Donald Rose, Ptnrs.*

37

(47)

\$8.40

TAMS Consultants Inc.
655 Third Ave.
New York, NY 10017
(212) 867-1777

The firm's specialties include airport terminals and other transit facilities, waterfront developments, school renovations, public housing and industrial facilities. In the New York City area TAMS is currently working on improvements and redevelopment programs at La Guardia and JFK airports and at Penn Station. Staff includes 25 registered architects and 40 structural engineers. *Austin E. Brant Jr., Pres.*

33

(22)

\$9.70

Stanley Consultants Group
225 Iowa Ave.
Muscatine, IA 52761
(319) 264-6600

This privately held firm operates branch offices in Denver, Chicago, West Palm Beach, Fla., Phoenix, Ariz., and Washington, D.C. Stanley is known for industrial buildings, offices and commercial complexes, educational and health care facilities, energy-related structures, and military and governmental buildings. The firm is providing engineering services for a \$30 million molecular biology building in Ames, Ia. *Richard H. Stanley, Chmn.*

38

(41)

\$8.02

HWH Architects Engineers Planners Inc.
1150 West Third St.
Cleveland, OH 44113
(216) 623-0220

This employee-owned firm is known for industrial projects, high-tech office facilities and R&D facilities. Projects under way include a lamp manufacturing addition for General Electric and renovations to Cleveland's Severance Hall, home of the Cleveland Orchestra. Reconstruction projects accounted for 45 percent of the firm's work. *H. Robert Wismar Jr., Chmn.*

34

(36)

\$9.09

Marathon Engineers/Architects/Planners Inc.
P.O. Box 335
Menasha, WI 54952
(414) 725-3923

Employee-owned Marathon is best known for consulting and process engineering for the pulp and paper, chemical and food industries. During the past year the firm has broadened its marketing emphasis to include the Southeast. A branch office is located in Augusta, Ga. Total staff includes 190 employees. *Harold R. Miller, Pres., CEO*

39

(35)

\$7.63

Schemmer Associates Inc.
1044 N. 115th St.
Omaha, NE 68154
(402) 493-4800

This privately held firm has a staff numbering 146 in six offices. An increased emphasis on efficiency has resulted in further automation of design as well as specifications during the past year. The firm is known for health care facilities, vehicle maintenance facilities and commercial/retail rehabilitation. Reconstruction accounted for 39 percent of the firm's work. *J.A. Schemmer, Chmn.; Roger Wozny, Pres.*

The phased, \$50 million renovation/expansion of the Crossroads Mall, Omaha, Neb., was coordinated by Schemmer Associates. Photo: Pat Drickey

30

(23)

\$10.86

Burns & McDonnell
4800 E. 63rd St.
P.O. Box 419173
Kansas City, MO 64141
(816) 333-4375

Scheduled for completion in 1989 are chemical development lab in Kansas City for Marion Laboratories and a manufacturing facility in Pueblo, Colo., for McDonnell Douglas Astronautics. Substantial work in the areas of hazardous/solid waste management, process engineering and electric power generation are included in total 1988 billings of \$49 million. *Newton A. Campbell, Chmn.; Dave G. Ruff, Pres.*

35

(31)

\$9.02

Stetson-Harza
185 Genesee St.
Utica, NY 13501
(315) 797-5800

This employee-owned firm focuses on projects for education, industry, the public sector and the military. Branch offices are located in Troy, N.Y., and Concord, N.H. The firm's staff numbers 309 employees, including 21 registered architects, 11 structural engineers, 10 mechanical engineers and 10 electrical engineers. Total billings for design and planning, including non-C.I.I. work, were \$14.8 million. *John B. Stetson, Pres.*

40

(38)

\$7.60

El Associates
115 Evergreen Place
East Orange, NJ 07108
(201) 672-5100

El Associates (formerly El Group) is a privately held firm with an emphasis on commercial projects. During the past year El Associates acquired a Syracuse, N.Y.-based design firm now known as El Clark. Staff of 109 employees includes 16 registered architects, 12 mechanical engineers and eight structural engineers. Reconstruction accounted for 60 percent of the firm's work. *Peter A. Cipriano, Pres.*

ENGINEER/ARCHITECTS

41

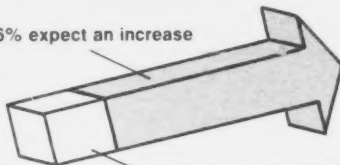
(34)
\$7.52

Booker Associates Inc.
1139 Olive St.
St. Louis, MO 63101
(314) 421-1476

Booker is known for transportation and industrial projects, housing, military-related projects and blast-resistant design. This employee-owned firm has a staff of 245 employees. Projects in construction include the \$15 million Missouri State Information Center in Jefferson City and program management services for a \$50 million state prison in Potosi, Mo. *James F. Moulder, CEO*

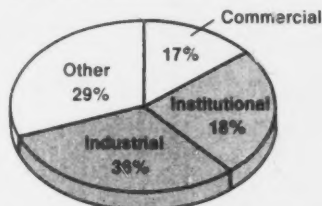
What is the Engineer/Architects' Outlook for Revenues in 1989?

76% expect an increase



24% expect the same

Breakdown of the Engineer/Architects' Billings



42

(32)
\$7.35

Shive-Hattery Engineers and Architects Inc.
P.O. Box 1803
Cedar Rapids, IA 52406
(319) 364-0227

Reconstruction accounted for 50 percent of the firm's billings. The firm's staff of 150 is located in three offices in Iowa as well as an office in Moline, Ill., and one in Dallas. Scheduled for completion in 1989 are additions to an assembly plant in Denton, Texas, for Peterbilt Motors, a newspaper production facility in Davenport, Ia., and a pharmaceutical R&D facility in Fort Dodge, Ia. *Donald P. Hattery, Pres.*

43

(30)
\$7.13

BEI Associates Inc.
601 W. Fort St.
Detroit, MI 48226
(313) 963-2300

Employee-owned BEI was formerly known as Blount Engineers and owned by Blount Inc. Current projects include industrial facilities for Chrysler and General Motors in the Detroit area, and renovation of a municipal courthouse and jail. Mechanical/electrical engineering accounted for 40 percent of billings, architecture and structural engineering for 20 percent each. *C.P. Kittides, Pres., CEO*

47

(42)
\$6.75

TSP Group Inc.
1110 West Ave. North
Sioux Falls, SD 57104
(605) 335-8448

The firm's emphasis is on medical, educational and industrial/manufacturing facilities, office buildings and nursing/retirement homes. Under way are motels for Super 8 in various locations, a county jail and county courts in Rapid City, S.D., and a hospital renovation in Fort Sheridan, Wyo. TSP is privately held and has a staff of 153 employees. *Ronald W. Mielke, Pres.*

44

(40)
\$7.11

Bennett-Ringrose-Wolsfeld-Jarvis-Gardner Group
700 Third Ave. St. South
Minneapolis, MN 55415
(612) 370-0700

The firm has two subsidiaries: BRW Architects provides architectural services while BRW Inc. provides urban design, planning, transportation and civil engineering. The firm specializes in specialty retail, mixed-use, office, hotel, adaptive re-use and educational projects as well as solar op'c and earth-sheltering design. *David Bennett, Pres., BRW Architects; Peter Jarvis, Pres., BRW Inc.*

48

(49)
\$6.50

Anderson-Nichols & Co. Inc.
150 Causeway St.
Boston, MA 02114
(617) 742-3400

This employee-owned firm operates a branch office in Concord, N.H., and has a staff of 127 employees, including nine registered architects, six structural engineers and six mechanical engineers. Among projects scheduled for completion this year are a Chrysler distribution center in Mansfield, Mass., and an R&D/office facility in Tewksbury for Raytheon. *Joseph F. Keane, Pres., CEO*

45

(44)
\$8.90

Symmes Maini & McKee Associates Inc.
1000 Massachusetts Ave.
Cambridge, MA 02138
(617) 547-5400

The firm's specialties include corporate, data/conference, microelectronics and biotechnology projects. Among recent projects are corporate facilities in Massachusetts for New England Telephone and Nixdorf Computer, computer centers for Digital Equipment Corp. and Commercial Union Insurance Co., and biotechnology facilities for Sero Laboratories and RepliGen Corp. *Thomas E. Vogel, Pres.*

49

(46)
\$5.50

Hixson Inc.
25 Merchant St., #400
Cincinnati, OH 45246
(513) 771-5700

The firm's building types include corporate offices, R&D, manufacturing, distribution and retail. Recent projects include food processing facilities in California, Texas, New York and Ohio, and corporate offices for Champion International, Reliance Electric and Hewlett-Packard. Reconstruction projects accounted for 56 percent of the firm's billings. *J.W. Ach, Pres., CEO*

46

(45)
\$6.89

The Piedmont Group
P.O. Box 1717
Greenville, SC 29602
(803) 242-1717

Piedmont is best-known for industrial and process engineering. Projects scheduled for completion in 1990 include a \$15 million training facility for Glaxo Inc. in Zebulon, N.C., and a \$15 million office building for NCR in Atlanta. Staff of 132 employees includes 14 registered architects, seven mechanical engineers and six structural engineers. *E.W. Merck, Chmn*

50

(39)
\$5.39

Foth & Van Dyke
P.O. Box 19012
Green Bay, WI 54307
(414) 497-2500

The firm operates four offices at locations in Wisconsin as well as an office in Minneapolis. Architectural services have been expanded, accounting for 20 percent of the firm's total billings last year. Total billings including non-C.I.I. work were \$16.4 million. *Steven Van Dyke, Chmn.; Joseph Linssen, Pres.; Joseph Homel Jr., Exec.*

Symmes Maini & McKee incorporated passive solar design into Commonwealth Electric's operations center in Wareham, Mass. Photo: Richard Mandelkorn

ENGINEERS

ENGINEERS' C.I.I. BILLINGS RISE 12 PERCENT IN 1988

Firms in the top five positions record major growth, contributing significantly to group's total increase

1 (2) \$110.98 Fluor Daniel Inc. Daniel Building Greenville, SC 29601 (803) 298-2500 With a total staff of 14,730, firm employs 809 engineers. Firm is divided into industrial, process, government and power divisions. Representative engineering projects include a 1 million-sq ft. bakery in Stuarts Draft, Va., a microbiology facility for Amgen in Thousand Oaks, Calif., and a tissue mill for Kimberly Clark in Loudon, Tenn. Vincent L. Kontny, Pres., CEO	5 (—) \$34.45 Dames & Moore 911 Wilshire Blvd. Los Angeles, CA 90017 (213) 683-1560 With offices in 28 states and overseas, firm specializes in soils and foundation, civil, structural and geotechnical engineering. Recent projects include foundation investigation and design consultation for the proposed Grand Central Center, Miami. Twenty percent of the firm's work is with the government. George D. Leal, CEO	
2 (—) \$86.58 Law Engineering Inc. P.O. Box 888013 Atlanta, GA 30356 (404) 396-8000 The corporate restructuring of firm's parent company, Law Companies Group Inc., included the acquisition of Woods Engineering and PCS (pavement consultant). Firm emphasis is on construction materials consulting and engineering, geotechnical and environmental engineering. Current projects include survey and technical specifications for roofs at five Texas prisons. Walter T. Kiser, Pres., COO	6 (13) \$27.20 Simons-Eastern Consultants Inc. One West Court Square Decatur, GA 30030 (404) 370-3200 Firm emphasis is on heavy industrial facilities. Recent projects include a \$450 million expansion of Federal Paperboard, a \$300 million pulp mill expansion in Cloquet, Minn., and a new \$300 million facility for Alabama River Newsprint in Claiborne, Ala. Thirty percent of the firm's work involves reconstruction. M.J. Golanski, Pres.	
3 (1) \$80.00 United Engineers & Constructors 30 S. 17th St. Philadelphia, PA 19101 (215) 422-3000 Firm specializes in engineering and construction of biotechnology and chemical plants as well as general manufacturing, research institutions, gas processing and power plants. Projects completed in 1988 include a biomedical R&D/manufacturing complex in Durham, N.C., and a manufacturing facility for Cetus Corp. in Emeryville, Calif. Gunnar E. Sarsten, Pres., CEO	7 (8) \$24.67 BE&K Inc. 2000 Int'l. Park Drive Birmingham, AL 35243 (205) 969-3600 Firm formed a joint venture with Davy McKee Corp. to develop projects in pharmaceuticals, foods and related process industries. Firm provides engineering for industrial plants. Pulp mill expansions dominate firm's 1988 project list. Sixty percent of the firm's work involves reconstruction. T.C. Kennedy, Pres.; T.M. Goodrich, Exec. VP	The Federal Building in Oakland is one of Syska & Hennessy's current projects. Photo: Peter Xiques 9 (5) \$23.15 Midwest Technical Inc. 4350 Glendale-Milford Road Cincinnati, OH 45242 (513) 733-2331 With more than 900 employees, firm provides full consulting engineering and temporary technical services for industrial building projects. Government projects accounted for 50 percent of the firm's billings. Reconstruction work accounts for 5 percent of firm's billings. Conrad E. Schwager, Chmn.
4 (4) \$37.42 Syska & Hennessy Inc. 11 West 42nd St. New York, NY 10036 (212) 921-2300 Twenty-five percent of the firm's full-service engineering work is with government agencies. Projects include Suffolk County Jail in Boston, Mass., a \$92 million design/build jail, McCormack & Hodge headquarters in Natick, Mass., which is cooled solely by thermal storage; and participation in the Ellis Island renovation. John F. Hennessy III, Chmn.; Christopher H. Richmond, Pres.	8 (15) \$23.40 Peter F. Loftus Division of Eichleay Engineers Inc. 6585 Penn Ave. Pittsburgh, PA 15208 (412) 363-9600 Seventy percent of firm's work is in renovation. Recent work includes a new \$25 million wing to Shadyside Hospital in Pittsburgh and the renovation of a boiler facility for the Pennsylvania Department of General Services State Correctional Institution in Huntingdon, Pa. Seventy percent of the firm's work involves reconstruction. Samuel C. Lyon, Div. Pres.	10 (11) \$22.00 John A. Martin Assoc. Inc. 1800 Wilshire Blvd. Los Angeles, CA 90057 (213) 483-6490 Firm established new offices in Chicago, Denver and Salt Lake City. Firm's consulting structural engineering work continued on the San Diego Convention Center, Los Angeles Convention Center, the Colorado Convention Center and the Los Angeles County Jail. Government projects accounted for 20 percent of firm's billings. John A. Martin, CEO

ENGINEERS

11

(12)
\$21.97

Gilbert/Commonwealth Inc.
P.O. Box 1498
Reading, PA 19603
(215) 775-2600

Twenty-five percent of the firm's work is with the government. Projects include construction documents for a \$1 million addition to the McGuire Air Force Base in New Jersey and the conceptual design and hazard analysis of a 30-lab structure for the Naval Air Development Center, Warminster, Pa. *Charles D. Williams, Pres.*

12

(10)
\$18.36

Flack + Kurtz Consulting Engineers
475 Fifth Ave.
New York, NY 10017
(212) 532-9600

The firm opened offices in London and Australia in 1988. Projects include the \$120 million Boston Garden sports facility in Boston, the \$110 million Madison Square Garden renovation, the 600,000-sq.-ft. Americas Tower office building and a 30-story office building, both in New York City. Ten percent of firm's work involves reconstruction. *Peter Flack, Norman D. Kurtz, Managing Principals*

13

(7)
\$15.78

Cygna Corp.
101 California St.
San Francisco, CA 94111
(415) 397-5600

Firm provides earthquake engineering for all building types, multidiscipline engineering and project management. Recent projects include the West County Justice Center in Contra Costa County, Calif., Nordstrom's San Francisco Center in San Francisco and the Ritz Carlton Hotel in Marina del Rey, Calif. *Richard Stuart, CEO; Ben Kacyra, Chmn.; Sanford Tandowsky, VP*

14

(9)
\$13.80

Bechtel Group Inc.
50 Beale St.
San Francisco, CA 94119
(415) 768-1234

Projects include polyethylene terephthalate (PET) facilities in South Carolina and England, the Port of Houston Integrated Automated Cargo Facility, an advanced lithography facility and a master plan for incorporating the latest high-tech infrastructure at JFK International Airport. Twenty-two percent of the firm's work is with the government. Bechtel is also listed in Design/Builders category. *S.D. Bechtel Jr., Chmn.*

17

(23)
\$10.30

R.G. Vanderweil Engineers
266 Summer St.
Boston, MA 02210
(617) 423-7423

With a total staff of 131 employees, firm executes mechanical and electrical design for buildings and multiproject developments. Recent work includes a 110,000-sq.-ft. golf ball manufacturing facility for Acushnet Co./Titleist, a conversion of a 400,000-sq.-ft. warehouse into a laboratory in Boston and a mechanical and electrical retrofit of the Massachusetts State Capitol Complex. *Gary Vanderweil, Pres.*

15

(—)
\$11.11

Patton, Harris, Rust and Assoc. P.C.
P.O. Box 901
Fairfax, VA 22030
(703) 273-8700

Firm emphasis is on commercial office buildings, schools and industrial parks. Sample projects include the \$40 million Mobil Oil headquarters expansion in Fairfax, Va., the \$1.2 million Beau-Meade Office Park and the \$45 million University Center at George Washington University, both in Loudoun County, Va. *Charles R. Weber, Pres.; Thomas D. Rust, Eugene F. Fournier, Sr. VPs*

18

(—)
\$10.09

O'Brien & Gere Engineers
1304 Buckley Road
Syracuse, NY 13221
(315) 451-4700

Seventy-five percent of the firm's work involves reconstruction. Major areas of service include facilities engineering, building design and site development of warehouses, laboratories, office and computer centers, service centers and manufacturing facilities. Forty-two percent of the firm's work is with the government. *R.L. Sutphen, Chmn.; J.R. Loveland, Pres.*

16

(24)
\$10.35

Joseph R. Loring & Assoc.
1720 Eye Street, N.W.
Washington, DC 20006
(202) 296-6583

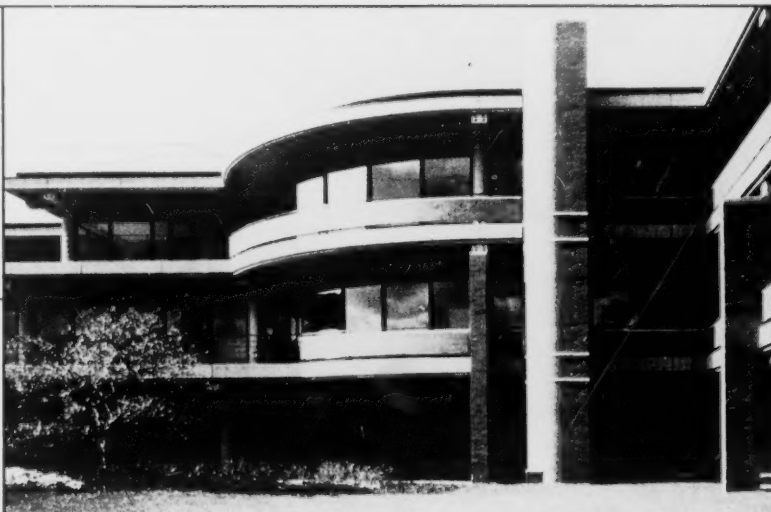
Firm performs mechanical, electrical, plumbing and fire protection, and site/civil engineering for R&D facilities, labs, office and institutional buildings and airports. In-house services include vertical transportation, lighting, life safety, telecommunications and building automation systems. *Joseph R. Loring, Chmn., CEO; Barry L. Maltz, Pres.*

19

(21)
\$9.50

Lehr Associates
130 W. 30th St.
New York, NY 10001
(212) 947-8050

Firm concentrates on mechanical, electrical, sanitary, fire protection/life safety engineering and design and planning for office buildings, hotels, health care facilities and banks. Recent projects include the Brooklyn Renaissance Center office and hotel complex, the Disney Swan Hotel and a \$20 million renovation and addition to the Newark Museum in New Jersey. *Valentine A. Lehr, Louis J. Lalli, Ptnrs.*



McDonald's Corporate Headquarters is a project completed by Flack + Kurtz in 1988. Photo: Hedrich-Blessing

Tower Center Complex in East Brunswick, N.J., is a recent project by Loring & Assoc. Photo: Otto Bates

20(25)
\$9.13**Weidlinger Associates**
333 Seventh St.
New York, NY 10001
(212) 563-5200

Firm's emphasis is on the design of long-span, seismic, high-rise, protective and special structures. Offices are located in Cambridge, Mass., Los Altos, Calif., Arlington, Va., and Brussels, Belgium. Current projects include the Galleria at Riverside Place, an office and retail center in Cambridge, Mass., and Commonwealth Center, a high-rise office, retail, hotel and theater complex in Boston. *Paul Weidlinger, Prin.*

25(39)
\$7.29**KPFF Consulting Engineers**
1201 Third Ave.
Seattle, WA 98101
(206) 622-5822

With offices in Seattle, Portland and Los Angeles, firm specializes in structural design, shoring and excavation systems. Recent projects include a curtain wall for Bellevue Place in Bellevue, Wash., and Second & Columbia Office Building in Seattle. Twenty percent of the firm's work involves government projects. *David T. Thomas, Pres.; Arthur W. Johnson, John G. Tawressey, VPs*

27(29)
\$7.20**Lowry-Sorensen-Willcoxson Engineers Inc.**
2333 W. Northern Ave.
Phoenix, AZ 85021
(602) 249-1320

Firm introduced a lighting design group in 1988. Firm's expertise is in health care, prison, educational and institutional facilities. Recent projects include McDonnell-Douglas headquarters in Mesa, Ariz., and the renovation of the Valley Bank Center, a 40-story high rise in Phoenix. *Ariz. Robert J. Willcoxson, Pres.*

21(18)
\$9.12**Simpson Gumpertz & Heger Inc.**
297 Broadway
Arlington, MA 02174
(617) 643-2000

With offices in Arlington, Mass., and San Francisco, firm's emphasis is on structural design of medical, research, science and office buildings and special structures. Firm executes structural investigations for renovation. Recent Boston projects include Dana Farber Cancer Research Center and the redesign of John Hancock Tower roofing system. *Howard Simpson, Werner H. Gumpertz, Frank J. Heger, Sr. Principals*

The 1989 top five engineering firms reported a total increase of more than \$81 million in billings, a growth of 25 percent over the firms that held last years' top five positions.

22(40)
\$7.97**Rolf Jensen & Assoc. Inc.**
1751 Lake Cook Road
Deerfield, IL 60015
(312) 948-0700

Firm specializes in fire protection engineering and building code consulting. Nearly one-third of firm's 1988 billings involved renovation. Fifteen percent of the firm's work was with the government, including fire protection engineering for B-1 hangars. Another recent project was the creation of a fire protection master plan for the Los Angeles County Rapid Transit. *Rolf Jensen, Pres.*

26(36)
\$7.29**Smith Seckman Reid Inc.**
3319 Westland Ave.
Nashville, TN 37203
(615) 383-1113

Firm has established a national emphasis on health care facilities. Recent projects include a new \$40 million hospital in Hot Springs, Ark., a \$25 million bed tower addition to the Charlotte Memorial Hospital in Charlotte, N.C., and a renovation and addition to the Washington Hospital in Washington, D.C. *J. Robin Barrick, Pres., CEO*

28(27)
\$6.90**Shefferman & Bigelson Co.**
8455 Colesville Road
Silver Spring, MD 20910
(301) 587-4433

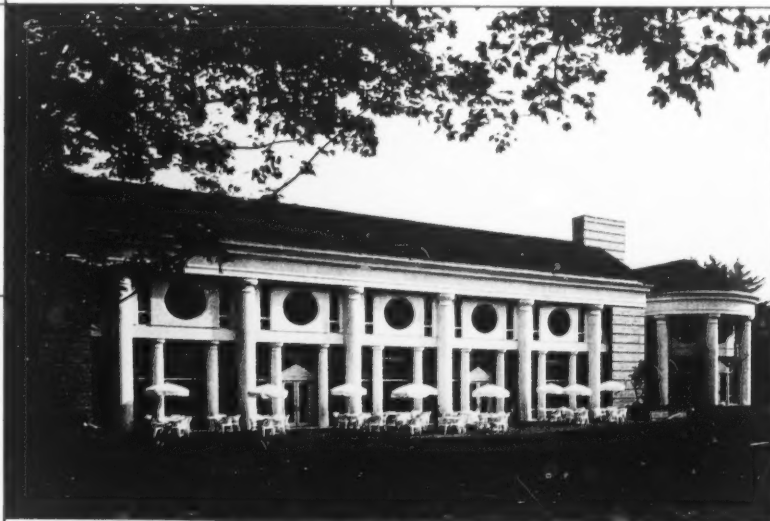
Firm was purchased by employees through an employee stock option plan. Mechanical and electrical design for office buildings and multi-family housing dominate the firm's 1988 billings. Recent projects include Tech World, a 2.8 million-sq.-ft. multiuse complex in Washington, D.C., and a 360-unit retirement housing complex in Silver Spring, Md. *S.M. Shefferman, Pres.*

23(22)
\$7.92**LeMessurier Consultants**
1033 Massachusetts Ave.
Cambridge, MA 02238
(617) 423-7423

With a total staff of 95, firm specializes in structural, mechanical and electrical engineering. Projects include the 1.4 million-sq.-ft. Bank One Center in Indianapolis and the Suffolk County House of Corrections in Boston. Reconstruction accounted for 15 percent of firm's work in 1988. *William J. LeMessurier, Chmn.; John H. Barrett, Pres.*

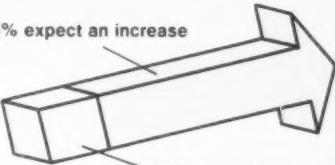
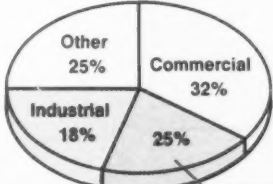
24(31)
\$7.56**Walter P. Moore and Associates Inc.**
3131 Eastside
Houston, TX 77098
(713) 630-7300

Firm provides structural, civil and traffic engineering and planning services from offices in Texas and Florida. Specialties include design of high-rise, health care, sports, aviation and corporate facilities. Recent projects include the Houston Astrodome expansion and the Tampa Convention Center. *Walter P. Moore Jr., Pres., Chmn.*



The Francis deMarnette Building at McClean Hospital in Belmont, Mass., is a project by Simpson Gumpertz & Heger. Photo: Jean Smith

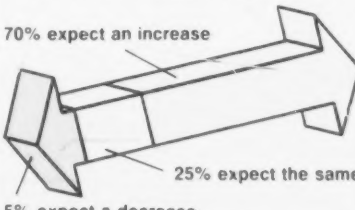
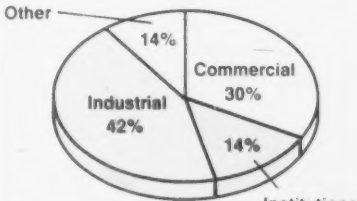
ENGINEERS

29 (—) \$6.69 Paulus Sokolowski and Sartor P.O. Box 4039 Warren, NJ 07060 (201) 560-9700 Firm's staff increased by 18 percent in 1988. Specialties include civil, geotechnical, structural, mechanical and electrical engineering. Recent projects include the \$42 million New Jersey Aquarium and the National Marine Fisheries Laboratory in Sandy Hook, N.J. <i>William Paulus Jr., Pres.; Anthony J. Sartor, Exec. VP</i>	33 (34) \$5.29 Schirmer Engineering Corp. 707 Lake Cook Road Deerfield, IL 60015 (312) 272-8340 Firm provides fire protection engineering including code consultation, design of fire protection systems, loss control inspections and risk management for commercial, institutional, industrial and government projects. Seventy-five percent of the firm's work is in reconstruction. Offices are also located in Falls Church, Va., and Pleasant Hill, Calif. <i>Chester W. Schirmer, Pres., CEO</i>	What is the Engineers' Outlook for Revenues in 1989? 76% expect an increase 24% expect the same 
30 (33) \$6.53 Newcomb & Boyd One Northside 75 Atlanta, GA 30318 (404) 352-3930 Firm provides mechanical and electrical engineering for commercial, institutional and light industrial construction. Firm also provides acoustic, life safety, solar, lighting design, telecommunications and security engineering. Forty percent of firm's work involves reconstruction. <i>Warren D. Shiver, Steven F. Bruning, Stephen M. Sessler, Ptnrs.</i>	34 (—) \$6.10 Affiliated Engineers Inc. 625 N. Segoe Road Madison, WI 53705 (608) 238-2616 Firm opened offices in Seattle and Columbus, Ind., to complement their existing offices in Milwaukee and Madison, Wis., and Gainesville, Fla. Firm specializes in industrial and R&D facilities, laboratories and hospitals. Special expertise in engine test cells, sophisticated air handling and exhaust systems. <i>Peter E. Starkweather, Pres.</i>	Breakdown of the Engineers' Billings 
31 (38) \$6.50 Shooshanian Engineering Associates Inc. 330 Congress St. Boston, MA 02210 (617) 426-0110 Forty percent of firm's work involves reconstruction and 20 percent is with government agencies. Emphasis is on energy-efficient mechanical and electrical designs. Recent projects include Hobbs Brook Office Park, a 450,000-sq.-ft. office building with an ice thermal storage HVAC system in Waltham, Mass., and Geneagles Hotel, in Lake Placid, N.Y. <i>Edward Shooshanian, Pres.</i>	35 (32) \$6.07 Kallen & Lemelson, Consulting Engineers 1430 Broadway New York, NY 10018 (212) 382-1800 Reconstruction accounted for 30 percent of 1988 billings. Firm saw an increase in health care and correctional facilities work. Recent projects include the 200-bed North General Hospital and a Department of Sanitation garage, both in New York City, and the \$50 million Martin Luther King Jr. Federal Court and Office Building in Newark, N.J. <i>Howard Kallen, Howard Lemelson, Ptnrs.</i>	38 (28) \$5.86 Carter & Burgess Inc. P.O. Box 2973 Fort Worth, TX 76113 (817) 335-2611 Firm opened first office outside of Texas in Fort Myers, Fla. Firm also acquired Variable Acoustics Corp., an acoustical and theater design firm. Recent work includes mechanical and electrical engineering for the renovation of the State Capitol of Texas and for the 4,200-bed Harris County Jail in Houston planned to be completed by 1990. <i>Jerry W. Allen, Pres.</i>
 Carter & Burgess designed the mechanical and electrical engineering for the Harris County Jail in Houston.	36 (—) \$5.90 EA-Mueller Inc. 140 Edgewood St. Baltimore, MD 21227 (301) 646-4500 In 1988 firm, formerly known as Mueller Inc., was acquired as a wholly owned subsidiary of EA Engineering, Science & Technology Inc. Firm executes mechanical and electrical designs and specializes in building types that require stringent environmental controls such as museums, hospitals, laboratories, computer centers and central utility plants. <i>Andrew J. Parker Jr., Pres.; Eugene F. Nerf Jr., Sr. VP</i>	39 (35) \$5.50 H.F. Lenz Co. 1732 Lyter Drive Johnstown, PA 15905 (814) 255-5821 Forty-seven percent of the firm's work involves reconstruction for high rises, historic structures, data centers, health care, educational, industrial and utility facilities. Recent projects include the conversion of a mill complex in Andover, Mass., into an office/research park and the conversion of a historic landmark into office and retail space in Philadelphia. <i>Charles J. Neuhoft, Pres.</i>
32 (30) \$6.46 Skilling Ward Magnusson Barkshire Inc. 1215 Fourth Ave. Seattle, WA 98161 (206) 292-1200 Firm provides structural and civil engineering for office, medical, research and educational facilities as well as for stadiums, convention centers and hotels. During 1988, 26 percent of the firm's work was for government agencies. Recent projects include Pacific First Center, a 47-story office building in Seattle and the Minneapolis Convention Center. <i>John B. Skilling, Chmn.; Jon Magnusson, CEO</i>	37 (—) \$5.90 Robson & Woese Inc. P.O. Box 0606 East Syracuse, NY 13057 (315) 445-2650 Billings estimated by BD&C. Firm provides electrical power and lighting design, life safety, security and communications engineering. Typical project types include medical research facilities, laboratories and correctional facilities. Sixty percent of the firm's work is for the government. <i>Fritz A. Traugott, Chmn.; H.L. Morin, Pres.</i>	40 (—) \$5.44 Jordan, Jones & Goulding Inc. 2000 Clearview Ave. N.E. Atlanta, GA 30340 (404) 455-8555 Firm provides full-service general engineering with emphasis on water and waste water treatment facilities, commercial, industrial, institutional and government facilities. Government work accounted for 65 percent of firm's 1988 billings. Recent projects include a mountain resort lodge and conference center in Towns County, Ga. <i>Charles H. Jones, Pres.</i>

DESIGN/BUILDERS

D/B WORK SHIFTS FROM COMMERCIAL TO INDUSTRIAL

The group averaged a 7 percent increase in institutional work, while commercial work fell by 14 percent

1 (1) \$855.20 The Austin Co. 3650 Mayfield Road Cleveland, OH 44121 (216) 382-6600 Austin is intensifying its interest in the Pacific Rim, particularly in airport facility projects in Japan and other regions of Southeast Asia. Firm has major U.S. offices in Chicago, Houston, Atlanta, Seattle, Kansas City, Mo., and Irvine, Calif. Staff of 2,000 includes 150 registered architects and 400 registered engineers. <i>Thomas J. Judge, Pres., CEO</i>	5 (9) \$225.40 Bechtel Group Inc. 50 Beale St. San Francisco, CA 94119 (415) 768-1234 Figure above reflects C.I.I. work, which accounts for only 9 percent of the total value of construction put in place in calendar 1988. Firm has 16 U.S. offices and 22 offices in foreign countries. Firm's staff of 28,000 includes over 5,000 registered engineers. Twenty-two percent of its work is for federal, state and local government agencies. Commercial work includes hotels. <i>S.D. Bechtel Jr., Chmn.</i>	8 (6) \$152.63 Carlson Management Svcs. Inc. 321 Commonwealth Road Cochituate, MA 01776 (617) 969-1200 Formerly known as the Carlson Group, the firm specializes in industrial, commercial, educational and health care facilities. Its architecture, engineering and technical services have been integrated to increase its focus on design and design/build activities. Carlson has developed a component approach to design and construction of nursing homes. <i>M. Joseph Celi, Pres., CEO</i>
2 (2) \$482.36 Fluor Daniel Daniel Building, 5th Floor Greenville, SC 29601 (803) 298-2500 Firm's current emphasis is on the globalization of its services and the integration of its international offices into industrial, process, power, hydrocarbon and government business sectors. For fiscal year ending October 1988, 37 percent of U.S. work was industrial, 13 percent commercial and 6 percent institutional. Recent projects include a medical office complex in Charleston, S.C. <i>V.L. Kontny, Pres., CEO</i>	What is the Design/Builders' Outlook for Revenues in 1989?  70% expect an increase 25% expect the same 5% expect a decrease	Breakdown of the Design/Builders' Construction  Other 14% Commercial 30% Industrial 42% Institutional 14%
3 (13) \$337.50 BE&K Inc. 2000 International Park Drive Birmingham, AL 35243 (205) 969-3600 Staff of 1,000 includes 112 registered engineers. Firm has formed a joint venture with Davy McKee Corp. to develop projects in pharmaceutical, food and related process industries. Firm is best-known for engineering and construction of industrial plants, power and cogeneration facilities. Sixty percent of its work involves reconstruction. <i>T.C. Kennedy, Pres.; T.M. Goodrich, Exec. VP</i>	6 (4) \$180.00 Opus Corp. P.O. Box 150 Minneapolis, MN 55440 (612) 936-4444 Construction estimated by BD&C. Commercial construction continues to comprise the majority of firm's work; specialties include offices, hotels and light manufacturing facilities. Recent projects include a 265,000-sq.-ft. headquarters and food laboratory for ConAgra in Omaha. A 320-room Marriott hotel in Minnetonka, Minn., was completed last fall. <i>Robert Dahlin, CEO</i>	9 (14) \$148.00 Schumacher & Forelle Inc. 560 Northern Blvd. Great Neck, NY 11021 (516) 482-8730 Eighty percent of S&F's work involves reconstruction. Firm specializes in the renovation, alteration, conversion and expansion of laboratory, manufacturing and administrative office facilities. Industrial projects accounted for 90 percent of firm's 1988 construction volume, while commercial projects accounted for the remaining 10 percent. <i>James W. Schubauer, Pres.</i>
4 (—) \$288.30 Kajima International Inc. 2100 North Central Road Fort Lee, NJ 07024 (201) 944-9800 Kajima has a real estate development subsidiary in New York City and an architectural design subsidiary in Los Angeles. Sixty-four percent of firm's work is industrial and 35 percent is commercial. Firm is best-known for manufacturing and process-related facilities. Recent projects include the 2.1 million-sq.-ft. Diamond-Star Motors auto assembly plant in Bloomington/Normal, Ill. <i>Shoichi Kajima, Pres., CEO</i>	7 (8) \$174.56 Marnell Corrao Associates 4495 S. Polaris Las Vegas, NV 89103 (702) 739-9413 Firm continues to specialize in the design and construction of hotel/casinos. One half of firm's work is reconstruction. Completed in May were the \$22 million Lady Luck hotel/casino in Las Vegas and the \$17.4 million Eldorado hotel/casino in Reno. A \$160 million Excalibur hotel/casino in Las Vegas will be completed this December. <i>Anthony Marnell II, Pres.</i>	 Carlson completed this 305,000-sq.-ft. operations center for American Express in Phoenix, Ariz.

DESIGN/ BUILDERS



Haskell Co. designed and constructed Marriott Ownership Resorts' 30-unit Heritage Club in Hilton Island, S.C. Photo: Dennis O'Kain, Atlanta

10

(7)
\$146.99

Morrison Knudsen Corp.
1 Morrison Knudsen Plaza
P.O. Box 73
Boise, ID 83707
(208) 386-8000

Firm has offices in Cleveland, San Francisco, Denver, Washington, D.C., Anchorage, Los Angeles and Cleveland. Virtually all of its design/build work for calendar 1988 was industrial. Recent projects include an Anheuser-Busch Brewery in Fort Collins, Colo., and a 700-acre Saturn Auto manufacturing complex in Spring Hill, Tenn. *William M. Agee, Chmn., Pres., CEO*

11

(12)
\$131.20

The Haskell Co.
Haskell Building
Jacksonville, FL 32204
(904) 791-4500

Haskell specializes in the design and construction of light manufacturing facilities, distribution centers, office buildings and data centers. Recent projects include an 80,000-sq.-ft. criminal justice center complex in Volusia County, Fla.; a 324-unit retirement community in Atlantic Beach, Fla.; and a Mazda Motor distribution center in Richmond, Va. *Preston H. Haskell, CEO; Kennon G. Holmes, Exec. VP*

14

(11)
\$101.20

Holmes & Narver Inc.
999 Town & Country Road
Orange, CA 92688
(714) 567-2400

Firm specializes in the design and construction of computing centers, laboratories, and communications and training facilities for federal, state and local government agencies. H&N is also broadening its marketing emphasis into the food and beverage industry. Forty-five percent of its work involves reconstruction. *Forrest C. Six, Pres.*

17

(21)
\$71.00

James N. Gray Construction Co. Inc.
250 W. Main St.
Lexington, KY 40507
(606) 281-5000

Firm recently opened offices in Cincinnati and Tokyo. Its subsidiary, INTEGRA, performs design and engineering work. Ninety-five percent of firm's 1988 construction volume was for industrial facilities, while 5 percent was for commercial. Firm's recently completed projects include facilities for R.R. Donnelley & Sons in Crawfordsville, Ind., and Glasgow, Ky. *C.C. Howard Gray, Pres.; James P. Gray II, Exec. VP*

12

(10)
\$109.76

Sverdrup Corp.
801 N. 11th St.
St. Louis, MO 63101
(314) 436-7600

Sverdrup houses some 4,500 employees in 20 U.S. offices. Firm's design/build work for calendar 1988 was split almost evenly between commercial and industrial facilities. Recent projects include the initial phase of a 500-acre, \$700 million mixed-use business community in St. Louis County, Mo., which includes a 181-room hotel, a 115,000-sq.-ft. office building and a 10,000-sq.-ft. retail pavilion. *B.R. Smith Jr., Chmn., CEO*

15

(17)
\$100.00

Marshall Erdman & Assoc.
5117 University Ave.
Madison, WI 53705
(608) 238-0211

Firm of 125 registered architects and 62 registered engineers is involved solely in the programming, design, development and construction of ambulatory health care facilities. Recent projects include medical office buildings in Hazelcrest, Ill.; West Raleigh, N.C.; and Winchester, Va. Firm has major offices in seven cities including Washington, D.C., Dallas and Denver. *Roger Hauck, Pres.; Marshall Erdman, Chmn.*

18

(—)
\$65.00

Condyne Inc.
101 Accord Park Drive
Norwell, MA 02061
(617) 871-4601

Firm has property management and realty subsidiaries and specializes in site acquisition, financing, design, engineering and construction of commercial, industrial and institutional facilities. Recent Massachusetts projects include a 64,200-sq.-ft. Comfort Inn hotel in Revere, a 48,000-sq.-ft. nursing home in Falmouth and a 150,000-sq.-ft. manufacturing facility in Plymouth. *Donald J. O'Neill, Chmn.*

13

(19)
\$103.70

Bank Building & Equipment Corp. of America
3630 S. Geyer Road
Sunset Hills, MO 63127
(314) 821-2265

BB&E has major offices in Hartford, Atlanta and St. Louis, and specializes in design and construction of financial and health care facilities. For fiscal year ending October 1988, 90 percent of its work was commercial and 10 percent was institutional. Sixty percent of its work involved reconstruction. Recent projects include the Hawaii National Bank in Honolulu. *Roger Scott, Pres.*

16

(—)
\$90.00

Butler Construction
P.O. Box 419917
Kansas City, MO 64141
(816) 968-3700

Firm is a wholly owned subsidiary of Butler Manufacturing Co. Eighty percent of its work for calendar 1989 was industrial, while 20 percent was commercial. Recent projects include a 253,000-sq.-ft. Quaker Oats warehouse in Kankakee, Ill., and a pair of 152,000-sq.-ft. Rohr manufacturing plants in Sheridan and Heber Springs, Ark. *William L. Johnsmeyer, Pres.*

19

(23)
\$60.00

AMCA International Construction Corp.
353 North Gloster
Tupelo, MS 38801-3696
(601) 842-3240

AMCA has offices in Ohio, Virginia, Alabama, Tennessee and Cairo, Egypt. Firm continues to specialize in design and construction of industrial and commercial facilities. Recently completed projects include a \$6 million distribution facility for Dennison Manufacturing Co. in Holliston, Mass., and a \$5.5 million manufacturing facility for Prestolite Wire Corp. in Paragould, Ark. *Robert C. Kelley, Pres.*

20

(20)
\$55.00

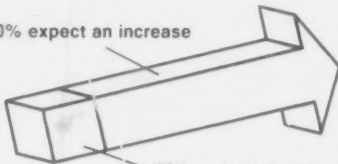
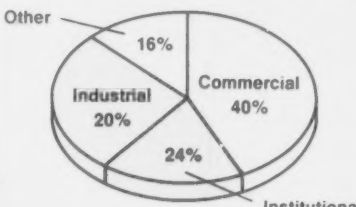
Huber, Hunt & Nichols
P.O. Box 128
Indianapolis, IN 46206
(317) 241-6301

The firm is a subsidiary of the Hunt Corp. and has subsidiaries in the areas of general contracting, construction management and highway paving. Staff of 475 includes 86 registered engineers. Firm emphasizes commercial, heavy industrial and athletic facilities. Recent projects include the 15,000-seat Albany County Civic Center in Albany, N.Y., and the 1.3 million-sq.-ft. Bank One Center in Indianapolis. *Bruce W. Bennett, Pres.*

Seventeen of the top 20 Design/Builders engage in reconstruction; on the average, it accounts for 27 percent of their work.

CONSTRUCTION MANAGERS

CONSTRUCTION MANAGEMENT FOCUSES ON LARGER PROJECTS Current activity includes industrial facilities, prisons and airport expansions

1 (1) \$1,163.42 Fluor Daniel 301 N. Main St. Greenville, SC 29601 (803) 298-2500 Firm also is listed in the Engineer, Design/Builder and General Contractor categories. Current projects include a new engine plant for Honda in Anna, Ohio, a 2,400-seat theater and concert hall in Greenville, S.C., and a 500-cell prison for the Virginia Department of Corrections in Buchanan, Va. <i>Vincent L. Kontny, Pres., CEO</i>	5 (3) \$91.00 Lehrer McGovern Bovis 387 Park Ave. South New York, NY 10016 (212) 576-4000 Current projects include the \$51 million American Broadcasting Co. headquarters in New York City; an 11-building, \$610 million office development in Brooklyn, N.Y.; a 135,000-sq.-ft. expansion of the Trump Castle hotel in Atlantic City, N.J.; and the 690,000-sq.-ft. AT&T Information Systems headquarters in Bridgewater, N.J. <i>Peter Lehrer, Gene McGovern, Co-Chmn.</i>	8 (10) \$38.11 Tishman Realty & Construction Co. 666 Fifth Ave. New York, NY 10103 (212) 399-3600 Total fees were estimated by BD&C on the basis of a put-in-place construction value of \$762 million. Current projects include the \$375 million Walt Disney World Dolphin and Swan Hotel/Convention Complex near Orlando, Fla.; the \$120 million Royal Concordia Hotel in New York City; and the \$106 million Ronald Reagan State Office Building in Los Angeles. <i>John L. Tishman, Chmn., CEO</i>
2 (5) \$467.40 Bechtel Group Inc. 50 Beale St. San Francisco, CA 94119 (415) 768-1234 Firm also is listed in the Engineer and Design/Builder categories. Current projects include an IBM advanced lithography facility in E. Fishkill, N.Y.; a Smorgon Consolidated Industries paper manufacturing facility in Alsip, Ill.; a \$2.7 billion expansion of JFK International Airport in New York City and expansion of the American Airlines terminal at O'Hare International Airport in Chicago. <i>S. D. Bechtel Jr., Chmn.</i>	6 (6) \$58.00 Huber, Hunt & Nichols Inc. P.O. Box 128 Indianapolis, IN 46206 (317) 241-6301 Firm also is listed in the General Contractor and Design/Builder categories. Current projects include the 20,000-seat Bradley Center arena in Milwaukee; a Holiday Inn in Columbus, Ohio; the One Liberty Place office tower in Philadelphia; Market Tower in Indianapolis; and the two-building Tower Center office development in E. Brunswick, N.J. <i>Bruce W. Bennett, Pres.</i>	9 (—) \$31.25 Sverdrup Corp. 801 N. 11th St. St. Louis, MO 63101 (314) 436-7600 Firm also is listed in the Engineer/Architect and Design/Builder categories. Current projects include major airport expansion programs in Detroit, St. Louis and Phoenix; a \$525 million U.S. Postal Service facilities program (a joint venture with Gilbane Building Co.) and a multibillion-dollar renovation/replacement program for U.S. embassies worldwide. <i>B. R. Smith, Chmn., CEO</i>
3 (4) \$449.59 Morrison Knudsen Corp. 1 Morrison Knudsen Plaza Boise, ID 83707 (208) 386-8000 Current projects include the General Motors Saturn auto manufacturing complex in Spring Hill, Tenn., which is scheduled for completion in 1990; 252- and 96-bed state prisons at Boise and Orofino, Idaho; a 1,700-cell prison in Greensville, Va.; and an Anheuser-Busch Brewery in Fort Collins, Colo. <i>William M. Agee, Pres., CEO</i>	What is the Construction Managers' Outlook for Revenues in 1989? 80% expect an increase  20% expect the same Breakdown of the Construction Managers' Billings 	
4 (2) \$155.46 CRS Sirrine Inc. 1177 West Loop South Houston, TX 77027 (713) 552-2000 Firm also is listed in the Engineer/Architect category. Current projects include a 1.5 million-sq.-ft. research and development facility for 3M Corp. in Austin, Texas; the 4 million-sq.-ft. Merrill Lynch World Headquarters in New York City; the \$725 million Kings County Prison in Avenal, Calif.; and a \$1.5 billion educational facilities construction program in Dade County, Fla. <i>Bruce W. Wilkins, Pres., CEO</i>	7 (7) \$43.07 Gilbane Building Co. 7 Jackson Walkway Providence, RI 02940 (401) 456-5800 Total fees were estimated by BD&C on the basis of a put-in-place construction value of \$870 million. Completed projects include the two-building, \$22 million Center for Innovative Technology in Fairfax, Va., and a \$21 million addition at General Mitchell International Airport in Milwaukee. Under construction is a \$45 million manufacturing/warehouse/laboratory project for Becton Dickinson & Co. in Sparks, Md. <i>Paul J. Choquette, Pres.</i>	10 (9) \$18.64 Morse/Diesel Inc. 1515 Broadway New York, NY 10036 (212) 730-4000 Projects completed include the 38-story NBC Tower at Cityfront Center in Chicago; the 2.4 million-sq.-ft. Franklin Mills retail center in Philadelphia and a \$60 million library at Queens (N.Y.) College. Projects in progress include a 27-story office building in Chicago for the U.S. General Services Administration and an \$80 million addition/renovation at Bronx-Lebanon Hospital in New York City. <i>Donald H. Piser, Chmn., CEO</i>

GENERAL CONTRACTORS

C.I.I. VOLUME POSTS SMALL DECLINE

Commercial work drops from 52 percent to 46 percent of the group's total activity



Centex Corp. was general contractor for the 666,000-sq.-ft., four-building General Dynamics West complex in Fort Worth, Texas.

1

(1)

\$2,972.05

The Turner Corp.
633 Third Ave.
New York, NY 10017
(212) 878-0400

Company completed 263 buildings in 1988, representing a total of 33.2 million square feet. It had 450 active projects, and the average job size was \$12 million. By focusing on the stronger commercial markets in the Northeast and North Central regions and expanding sales in the Southeast, company was able to maintain strong commercial sales. *Alfred T. McNeil, Chmn., Pres.; Harold Parmelee, Pres., Turner Construction Co.*

4

(4)

\$866.55

McDevitt & Street Co.
One Parkway Plaza
Charlotte, NC 28232
(704) 525-8110

Current projects include the Fashion Centre at Pentagon City, an office/retail/hotel project in Arlington, Va.; the 1 million-sq.-ft. Richland Fashion Mall in Columbia, S.C.; the 215-suite Embassy Suites hotel in Los Angeles; a 267-room Hyatt Hotel in Charlotte; and \$17 million of additions and renovations at Burroughs Wellcome Co. in Greenville, N.C. *E. R. Street, Chmn., CEO*

2

(2)

\$1,248.00

Jones Group Inc.
6060 St. Albans St.
Charlotte, NC 28287
(704) 553-3100

Current projects include the 70-story 311 S. Wacker in Chicago, which will be the world's tallest concrete building; the 42-story One First Union Center in Charlotte; a \$100 million maximum security jail in Saugus, Calif.; and the 7,200-seat Calvary Church in Charlotte. Completed the 68-story 900 N. Michigan retail/office/apartment building in Chicago. *Johnnie H. Jones, Pres., Chmn.*

5

(3)

\$843.78

The Clark Construction Group Inc.
7500 Old Georgetown Road
Bethesda, MD 20814
(301) 657-7100

Projects completed include the 465,000-sq.-ft. 101 Arch Street office building in Boston; the 800,000-sq.-ft. Two Logan Square office building in Philadelphia; and the 1.6 million-sq.-ft. Techworld Hotel & Trade Center in Washington, D.C. Under construction are the 825,000-sq.-ft. State Office Building in Los Angeles and a 500,000-sq.-ft. office complex in Tysons Corner, Va. *A. James Clark, Chmn., CEO*

3

(5)

\$922.20

Centex Corp.
3333 Lee Parkway
Dallas, TX 75219
(214) 559-6500

Current projects include a \$134 million expansion at Orlando Airport; a \$68 million Veterans Administration Medical Center in Dayton, Ohio; the \$68 million Tampa Convention Center; the \$40 million Jesup Federal Prison in Tennessee; and the \$36 million North Houston (Texas) Mail Center. Commercial buildings were 55 percent of volume and institutional buildings were 45 percent. *Paul Seegers, Chmn.; Laurence Hirsch, Pres., CEO*

6

(10)

\$771.40

Fluor Daniel Inc.
301 N. Main St.
Greenville, SC 29602-9019
(803) 298-2500

Firm also is listed in the Engineers, Design/Builder and Construction Managers categories. Current general contractor projects include a major mill expansion at Federal Paperboard in Augusta, Ga.; a bank tower and office complex for Lincoln Properties in Columbia, S.C.; and a 1 million-sq.-ft. corporate headquarters for Mobil Fairfax Inc. in Fairfax, Va. Parent company is Fluor Corp. *Vincent L. Kontny, Pres., CEO*

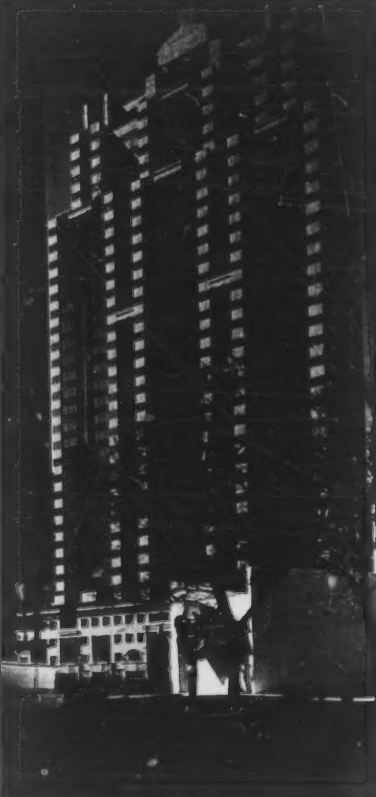
7

(6)

\$637.50

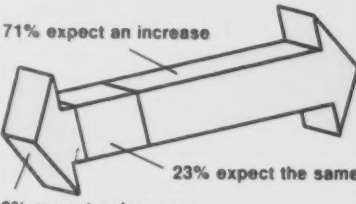
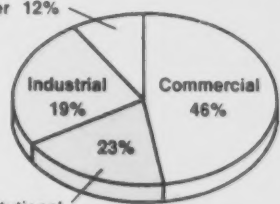
BE&K Inc.
2000 International Park
Drive
Birmingham, AL 35243
(205) 969-3600

Firm also is listed in the Engineer and Design/Builder categories. Current general contractor projects include a \$550 million Weyerhaeuser pulp mill expansion in Columbus, Miss., and a \$345 million Stone Container pulp mill expansion in Port Wentworth, Ga. Company formed a joint venture with Davy McKee Corp. to develop projects in the pharmaceutical and foods industries. *T.C. Kennedy, Pres.; T.M. Goodrich, Exec. VP*



Clark Construction Group completed Two Logan Square in Philadelphia.

GENERAL CONTRACTORS

8 (9) \$559.72 Perini Corp. 73 Mt. Wayte Ave. Framingham, MA 01701 (508) 875-6171 Firm completed the 850-room Hyatt Burlingame (Calif.) Hotel, the 1.75 million-sq.-ft. San Diego Convention Center, a \$35 million Life Science Building at the University of California (Berkeley), a 380,000-sq.-ft. office complex for Upjohn Pharmaceutical in Kalamazoo, Mich., and the expansion of the Tropicana Hotel/Casino in Atlantic City. A \$20 million renovation of the State House in Boston will be completed late this year. <i>David B. Perini, Chmn., Pres.</i>	11 (14) \$436.05 The Whiting-Turner Contracting Co. 300 E. Joppa Road Baltimore, MD 21204 (301) 337-5766 Projects under construction include the \$70 million Johns Hopkins Research Facility and a \$45 million printing plant for the Sunpapers, both in Baltimore; a \$45 million retrofit and expansion of an IBM facility at E. Fishkill, N.Y.; a \$24 million distribution facility in Elizabeth, N.J.; and a \$12 million renovation and expansion of an Anaheim, Calif., police facility. <i>Willard Hackerman, Pres.</i>	What is the General Contractors' Outlook for Revenues in 1989? 
9 (8) \$472.00 HCB Contractors 4600 Interfirst One Dallas, TX 75202 (214) 747-8541 Projects completed include the \$55 million Underground Atlanta, the \$29 million University Medical Center in Dallas, a \$15 million headquarters for Computer Sciences Corp. in Falls Church, Va., and the 16-story Cumberland Center II office building in Atlanta. Among projects to be completed next year is the 58-story Liberty Place II office building in Philadelphia. <i>Lawrence A. Wilson, Pres., CEO</i>	12 (15) \$398.64 McCarthy 1341 N. Rock Hill Road St. Louis, MO 63124 (314) 968-3300 Firm completed the 42-story Metropolitan Square office building in St. Louis; a 500-person maximum security correctional facility in Potosi, Mo.; the 506-room Phoenixian Resort Hotel in Scottsdale, Ariz.; and a 300-bed replacement hospital at Winchester (Va.) Medical Center. Under construction is a 412-bed replacement hospital for Dartmouth Hitchcock Medical Center, Hanover, N.H. <i>Michael M. McCarthy, Chmn.</i>	Breakdown of the General Contractors' Billings 
10 (21) \$463.32 The Pepper Companies 643 N. Orleans St. Chicago, IL 60610 (312) 266-4703 Current projects include a 1 million-sq.-ft. restoration at the Federal Reserve Bank of Chicago, a 240,000-sq.-ft. office building for Rockwell Graphics Systems in Westmont, Ill., and the 700,000-sq.-ft. Gardens Mall in Palm Beach Gardens, Fla. Staff of 280 includes six architects, two structural engineers and 14 other registered engineers. <i>Richard S. Pepper, CEO; Geoffrey Knudsen, COO</i>	13 (13) \$363.00 J.S. Alberici Construction Co. 2150 Kienlen Ave. St. Louis, MO 63121 (314) 261-2611 Current projects include a \$34 million U.S. Army Records Center and a \$52 million renovation of the Mart Building for the U.S. General Services Administration, both in St. Louis; two buildings for the U.S. Army Corps of Engineers at Fort Leonard Wood, Mo.; and a \$40 million can plant for Anheuser Busch in Newburgh, N.Y. <i>Gabriel J. Alberici, Chmn.</i>	14 (29) \$329.67 Walbridge Aldinger 38099 Schoolcraft Livonia, MI 48150 (313) 591-6000 The company's current projects range in size from \$200,000 to \$675 million and include a 350-room Marriott Hotel in Troy, Mich.; a \$50 million renovation/retrofit of a Ford Motor Co. assembly plant in Romeo, Mich.; a \$30 million expansion of Toyota's Georgetown, Ky., engine plant; and the 260,000-sq.-ft. Galleria IV Officecentre in Southfield, Mich. <i>John Rakolta Sr., Chmn.; John Rakolta Jr., Pres.</i>
 Pepper Construction Co. was general contractor for the 14-story Embassy Suites Hotel in San Diego. All suites overlook an interior atrium.		15 (12) \$328.73 Mellon Stuart Co. One North Shore Center Pittsburgh, PA 15212 (412) 323-4600 Nearing completion is the \$32 million rehabilitation of the former Hotel Continental in Chicago into the Intercontinental/Forum Hotel. Other current projects include "The Chicagoan," a 37-story residential/commercial complex in Chicago, and the 16-story Gateway Center Office building in Orlando, Fla. <i>R. H. Luffy, Pres., CEO</i> 16 (11) \$323.04 Blount Construction Group P.O. Box 949 Montgomery, AL 36101 (205) 244-4000 Major projects completed include the \$107 million Wright-Patterson Regional Medical Center in Dayton, Ohio; the \$190 million San Jose (Calif.) Convention Center; the 1.7 million-sq.-ft. AT&T Corporate Center in Chicago; and the \$51 million Hall of Justice in San Jose, Calif. Projects under construction include the \$208 million Madigan Army Medical Center at Fort Lewis, Wash. <i>James Terry Honan, Pres., CEO</i>

17
(19)
\$312.00

Huber, Hunt & Nichols
P.O. Box 128
Indianapolis, IN 46206
(317) 241-6301

Firm also is listed in the Construction Managers and Design/Build categories. Current general contractor projects include the 615,000-sq.-ft. AT&T Solid State Technology Center in Allentown, Pa.; a 175,000-sq.-ft. residence hall at Butler University in Indianapolis; and a 322,000-sq.-ft. exterior renovation of the Indiana State Office Building One in Indianapolis. *Bruce W. Bennett, Pres.*

22
(20)
\$256.80

Fru-Con Construction Corp.
15933 Clayton Road
Ballwin, MO 63022
(314) 391-6700

Current projects include the 155,000-sq.-ft. Sherwood Medical headquarters and a \$100 million computer center for Southwestern Bell Telephone Co., both in St. Louis; improvements to a Proctor & Gamble Co. paper converting facility in Cape Girardeau, Mo.; expansion of a Proctor & Gamble paper mill in Green Bay, Wis.; and a paper machine rebuild for Mead Paper in Escanaba, Mich. *Manfred Lupp, Pres.*

18
(18)
\$308.00

Swinerton & Walberg Co.
580 California St.
San Francisco, CA 94104
(415) 421-2980

Current projects include a \$13 million renovation at the California State Prison at San Quentin, a \$67 million terminal expansion for Delta Airlines at Los Angeles International Airport and a \$27 million Guest Quarters Hotel in Santa Monica, Calif. Scheduled for completion in 1990 are the 25-story APC office building in Oakland and the 20-story Federal Home Loan Bank building in San Francisco. *David H. Grubb, Pres.*

23
(26)
\$246.32

PCL Enterprises Inc.
200 Filmore St.
Denver, CO 80206
(303) 355-2522

Firm completed a \$20 million Hughes Aircraft research and development facility in Denver and the \$35 million Gavudae Common retail center in Minneapolis. Under construction are the 35-story Manulife office building in Los Angeles and the \$27 million Mountain Pointe High School in Phoenix. About 23 percent of company's work (not included in total above) involves highway and transportation work. *R. Stollery, Chmn.*

19
(36)
\$276.00

Rudolph and Sletten Inc.
P.O. Box 4637
Foster City, CA 94404
(415) 572-1919

Projects completed in California include the \$42 million Center for Molecular and Genetic Medicine at Stanford University in Palo Alto and an \$8.5 million facility for Apple Computers in Cupertino. Projects scheduled for completion next year include a \$25 million facility for Advanced Cardiovascular Systems in Santa Clara and a \$65 million submicron facility for Advanced Micro Devices in Sunnyvale. *Onslow H. Rudolph, Pres.*

24
(—)
\$245.84

Sundt Corp.
4101 Irvington Road
Tucson, AZ 85726
(602) 748-7555

Firm completed 45 building projects in 1988 and has 32 in progress currently. Completed projects include the \$57 million Information Systems Building and the \$6 million Centerpoint Plaza office/retail development, both in Tucson; and the 11-story Biltmore Financial II Office Building and the nine-story State of Arizona Revenue Building, both in Phoenix. *H. Wilson Sundt, CEO, Chmn.; Robert S. Sundt, Pres.*

26
(27)
\$241.00

Torcon Inc.
P.O. Box 609
Westfield, NJ 07091
(201) 232-8900

Projects completed in New Jersey include the 30-story Exchange Place Centre office building in Jersey City, the 15-story Four Gateway Center office building in Newark and a 110,000-sq.-ft. headquarters addition for Automatic Data Processing in Roseland. Company started a \$40 million renovation and addition at St. Barnabas Medical Center, Livingston, N.J. *Benedict Torcivia, Pres., CEO; Benedict Torcivia Jr. and Joseph Torcivia, Exec. VPs*

20
(—)
\$268.46

Barton-Malow Co.
P.O. Box 5200
Detroit, MI 48235
(313) 351-4500

Firm was listed last year in the Construction Manager category. Current work includes a \$31 million research center for Amoco Performance Products in Forsythe County, Ga.; a \$120 million judicial center in West Palm Beach, Fla.; and a \$33 million facility at Bartholomew County Hospital, Columbus, Ind. Company has sharpened its focus on the industrial market. *Ben C. Maibach, Pres.*

25
(46)
\$245.05

Walsh Construction Co.
101 Oakview Drive
Trumbull, CT 06611
(203) 373-7900

Firm completed the 20-story CityPlace II office building in Hartford, Conn. It also is completing the \$160 million Symphony Towers office/hotel development in San Diego, the \$195 million tertiary care building at Presbyterian Hospital in New York City, a \$36 million state prison in Crescent City, Calif., and a \$127 million advanced semiconductor technology center for IBM Corp. in E. Fishkill, N.Y. *William J. White, Pres.*

27
(31)
\$235.81

Morrison Knudsen Corp.
Morrison Knudsen Plaza
Boise, ID 83707
(208) 386-8000

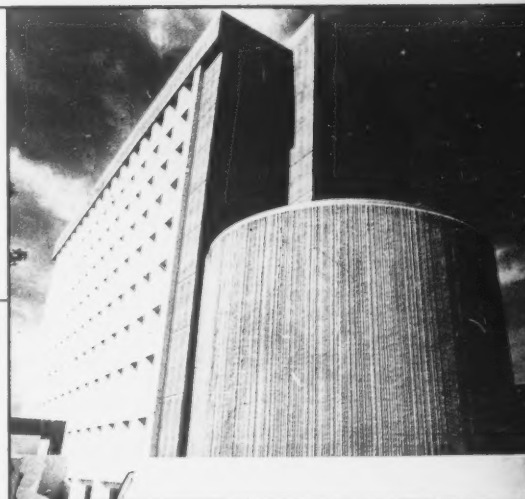
Firm also is listed in the Construction Manager and Design/Builder categories. Completed projects include the \$97 million expansion of Providence Hospital in Anchorage. Projects under construction include General Motors' Saturn auto manufacturing complex in Spring Hill, Tenn., which is scheduled for completion in 1990, and 1,400 units of military housing in Fairbanks, Watertown, N.Y., and Aberdeen, Md. *William M. Agee, Chmn., Pres., CEO*

21
(22)
\$267.00

Stolte Inc.
11300 W. Olympic Blvd.
Los Angeles, CA 90064
(213) 479-8066

Recently completed projects include a 203,000-sq.-ft. office building in Santa Monica, Calif.; the 88,000-sq.-ft. Directors Guild headquarters in Los Angeles; the 160,000-sq.-ft. Fairlane Plaza office building in Dearborn, Mich.; and the 72,000-sq.-ft. Solano County Justice Center in Fairfield, Calif. Projects under construction include the 395-room Beverly Park Hotel in Los Angeles. *Denval B. Hamby, Pres., CEO*

The average C.I.I. volume put in place by each firm was \$369.7 million; reconstruction work represented 16 percent of the total and government projects 19 percent.



Sundt Corp. was general contractor for the State of Arizona Revenue Building in Phoenix.

GENERAL CONTRACTORS



Beers Inc. was general contractor for BellSouth's Campanile building in Atlanta.

	30 (28) \$200.00 Kraus-Anderson Construction Co. 525 S. 8th St. Minneapolis, MN 55404 (612) 332-7281 Current projects include a \$5.4 million corporate office expansion for MTS Systems Corp. in Eden Prairie, Minn.; the nine-story Centerplace Office Building and 214-room Centerplace Radisson Hotel in Rochester, Minn.; a 149-room Courtyard by Marriott in Eden Prairie; a \$2.4 million library renovation at Macalester College in St. Paul; and an \$8.7 million warehouse-to-office conversion in Minneapolis. <i>Lloyd Engelsma, CEO</i>	35 (43) \$173.00 Beers Inc. 70 Ellis St. N.E. Atlanta, GA 30303 (404) 659-1970 Firm completed the 20-story Campanile office building for BellSouth in Midtown Atlanta. Current projects include a \$10 million addition to Middle Tennessee Medical Center and a \$15 million regional office building for State Farm Insurance, both in Murfreesboro, Tenn.; a \$10 million medical office building at Georgia Baptist Medical Center in Atlanta; and a Life Sciences Building at Emory University, Atlanta. <i>L.L. Gellerstedt, Pres.</i>
	31 (32) \$186.12 Robert E. McKee Inc. 2608 Inwood Road Dallas, TX 75235 (214) 357-4381 Firm completed a \$12 million computer center in Plano, Texas, for Electronic Data Systems and the \$21 million VLSI Technology Complex in San Antonio, Texas. Current projects include a \$14 million radar test facility for the U.S. Army Corps of Engineers at Holloman Air Force Base in New Mexico and the \$40 million Tarrant County Jail in Fort Worth. Subsidiary of Jacobs Engineering Group. <i>Richard Slater, Pres.; Roger Neal, Sr. VP</i>	36 (23) \$169.28 The Weitz Co. Inc. 800 Second Ave. Des Moines, IA 50309 (515) 245-7600 Current projects include a \$20 million criminal justice center in Aurora, Colo.; a \$22 million courthouse in Mesa, Ariz.; an \$11 million office building in Lincoln, Mass.; a \$10 million office building in Cambridge, Mass.; the \$30 million Central Iowa Racetrack in Des Moines; and the \$17 million Harbor's Edge II retirement community in Delray Beach, Fla. <i>Glenn De Stigter, Pres.</i>
	32 (30) \$186.00 Austin Commercial Inc. P.O. Box 2879 Dallas, TX 75221 (214) 630-7011 Firm completed a \$70 million corporate office facility for American Airlines in Fort Worth; an 800,000-sq.-ft. corporate office for Electronic Data Systems in Plano, Texas; a 320,000-sq.-ft. Neiman-Marcus distribution facility in Irving, Texas; and an 180,000-sq.-ft. professional office building at Methodist Hospital in Dallas. Under construction is a headquarters for Southwest Airlines in Dallas. <i>Ronald J. Gafford, Pres.</i>	37 (—) \$167.35 Pavarini Construction Co. 585 W. Putnam Ave. Greenwich, CT 06830 (203) 622-6700 Projects completed include a \$60 million facility at Presbyterian Community Hospital in New York City. Scheduled for completion in 1990 are the \$24 million General Accident Office Building in Melville, N.Y.; an \$11 million dormitory at Iona College in New Rochelle, N.Y.; and elementary schools in Plantation and Coral Springs, Fla. <i>George F. Pavarini, Chmn.</i>
28 (—) \$222.87 Carlson Management Svcs. Inc. 321 Commonwealth Road Cochituate, MA 01778 (617) 969-1200 Firm also is listed in the Design/Builder category. It completed an expansion and renovation at Piedmont Airlines corporate center in Charlotte, N. C.; a 350,000-sq.-ft. office complex in Phoenix; and the conversion of warehouse areas to office and laboratory space for Digital Equipment Corp. in Marlboro, Mass. <i>M. Joseph Celi, Pres., CEO</i>	33 (42) \$182.50 Nielsen Construction Co. 3127 Jefferson St. San Diego, CA 92138 (619) 291-6330 Projects completed include an 11-story office building at Rio Vista Plaza in San Diego and the Herberger Theater Center in Phoenix. Under construction are the Aventine in La Jolla, which includes three office buildings and a 400-room Hyatt Regency Hotel, and the 15-story La Jolla Executive Center. <i>Stephen C. Marble, Pres.</i>	38 (40) \$165.07 Dick Corp. P.O. Box 10896 Pittsburgh, PA 15236 (412) 384-1000 Projects completed include the \$150 million restoration of the Washington, D.C., Union Station and four correctional facilities — located in Southport, Cape Vincent, Ogdensburg, and Malone — for the state of New York. A 750-bed medium-security correctional facility in Brocton, N.Y., will be completed late this year. <i>Dorsey W. Dick, CEO</i>
29 (25) \$213.60 Hensel Phelps Construction Co. P.O. Box O Greeley, CO 80632 (303) 352-6565 Project completions in 1989 will include an \$8 million addition/renovation to the Pacific Gas & Electric Co. operations building in San Francisco and the \$28 million Sheraton at Torrey Pines Hotel in San Diego. To be completed next year are the \$25 million Paseo Nuevo Shopping Center in Santa Barbara, Calif., and the \$19 million K Street Office Tower in Sacramento. <i>Jerry L. Morgensen, Pres.</i>	34 (38) \$179.72 Kitchell Corp. 1006 S. 24th St. Phoenix, AZ 85034 (602) 275-7541 Current projects include a 237,000-sq.-ft. expansion of Scottsdale (Ariz.) Fashion Square; construction of two buildings at Irvine (Calif.) Medical Center; retrofit of a 34,000-sq.-ft. clean room at Hughes Research Center in Santa Barbara, Calif.; a 202,000-sq.-ft. City Hall for Irvine; and a 116,000-sq.-ft. civic center complex for Ocean-side, Calif. <i>William C. Schubert, Pres., CEO</i>	39 (39) \$152.00 Oltmans Construction Co. 10005 Mission Mill Road Whittier, CA 90608 (213) 948-4242 Firm completed a 415,000-sq.-ft. warehouse/office in Fontana, Calif.; several warehouse/office buildings for the Irvine/ODAP joint venture in Irvine; the \$7.5 million One Civic Plaza office building in Carson, Calif.; and an 850,000-sq.-ft. Pic 'N Save distribution center in Cucamonga, Calif. Under construction is a 458,000-sq.-ft. warehouse/office in Ontario, Calif., for Thrifty Corp. <i>R.M. Holmes, Chmn., CEO; J.O. Oltmans, Pres.</i>

GENERAL CONTRACTORS

40 (35) \$149.00 Continental Heller Corp. P.O. Box 2551 Sacramento, CA 95812 (916) 920-9600 Projects completed in 1988 include the \$26 million Loma Linda (Calif.) Medical Center, the \$9.8 million Operating Engineers Building in Pasadena, a \$17 million Veterans' Hospital in Long Beach, a \$17 million American Express Office Building in Phoenix, the \$19 million Seaport Center III and IV office buildings in Redwood City and a \$4.1 million kitchen remodeling at the University of California-Los Angeles. <i>Andrew E. Carlson, Pres., CEO</i>	43 (44) \$142.92 J. E. Dunn Const. Co. 929 Holmes Kansas City, MO 64106 (816) 474-8600 Firm completed an \$8.9 million K-mart distribution center in Lawrence, Kan., and the \$42 million Western Missouri Correctional Center in Cameron, Mo. Projects to be completed next year include the \$24 million Crown Center South Park office building in Kansas City, Mo., and a \$14 million cultural education center at Johnson County Community Colleges, Overland Park, Kan. <i>Terrence P. Dunn, CEO</i>	46 (50) \$127.40 Manhattan Construction Co. 111 E. First St. Tulsa, OK 74103 (918) 583-6900 Current projects include the Harris County Jail in Houston; a computer center for Mobil Oil Corp. in Dallas; the Dulles Corporate Center office building in Herndon, Va.; the Fair Oaks Commerce Center in Fairfax, Va.; a prison in Atlanta, La.; a medical building at St. Luke's Episcopal Hospital in Houston; and the Forum Retirement Community in Houston. <i>L.F. Rooney, Pres.</i>
41 (—) \$145.70 Blake Construction Co. 1120 Connecticut Ave., N.W. Washington, DC 20036 (202) 928-9000 Firm completed the \$39 million Sackler Gallery for Asian and African Art at the Smithsonian Museum and the \$17 million American University Sports and Convocation Center, both in Washington, D.C. Projects to be completed in 1990 include a \$36 million Biological Sciences building at the University of California-Irvine and a \$16.7 million doctors' building at Howard University Hospital in Washington. <i>Howard M. Bender, Chmn.; Stanley Prill, Pres.</i>	44 (48) \$135.00 AMCA International Construction Corp. 353 N. Gloster Tupelo, MS 38801 (601) 842-3240 Firm also is listed in the Design/Builder category. It operates under the name Jesco in the Sun Belt and as ENCORP in Northern regions. Current projects include a \$6 million warehouse in Montgomery, Ala.; a \$5 million Cooper Tire & Rubber Co. warehouse in Tupelo, Miss.; and the \$9 million Danbury (Conn.) Square Mall. <i>Robert C. Kelley, Pres.</i>	47 (41) \$119.17 Hardin Construction Group Inc. 1380 W. Paces Ferry Road, N.W. Atlanta, GA 30327 (404) 264-0404 Firm completed a 192-room Omni Hotel in Durham, N.C.; the 249-room Evergreen Conference Center and Resort in Stone Mountain, Ga.; a 188,000-sq.-ft. convention center in Gatlinburg, Tenn.; and the 506-room Atlanta Airport Hilton Hotel. Projects to be completed in 1990 include Barnett Tower in St. Petersburg, Fla., and an office building in Atlanta. <i>Earl L. Shell, Chmn., CEO</i>
		48 (—) \$115.00 Macco Constructors Inc. 14409 Paramount Blvd. Paramount, CA 90723 (213) 630-5801 Firm also is listed in the Specialty Contractors category. Completed projects include a \$21 million paint building and a structural test laboratory, both at McDonnell Douglas Corp. in Long Beach, Calif., and a \$2.5 million parking structure for the city of Beverly Hills, Calif. An \$18 million municipal courts facility in Downey, Calif., is nearing completion. <i>Bill McCune, Pres., CEO</i>
Blake Construction Co. was general contractor for the Adnan M. Khashoggi Sports & Convocation Center at the American University in Washington, D.C. Photo: Hilary Schwab		49 (—) \$110.00 Linbeck Construction Corp. P.O. Box 22500 Houston, TX 77227 (713) 621-2350 Firm completed a 210,000-sq.-ft. replacement facility for Cook-Fort Worth Childrens Medical Center in Fort Worth, renovation of the 11-story Sun Bank Building in Orlando, 580 beds of new student housing at the University of Hartford (Conn.), the 16,942-seat Miami Arena and renovation of the 14-story South Grand Hotel in Los Angeles. Projects to be completed in 1990 include the Howard Hughes Medical Center in Chevy Chase, Md. <i>Peter Doyle, Pres.</i>
42 (45) \$145.00 Dimeo Construction Co. 75 Chapman St. Providence, RI 02905 (401) 781-9800 Projects completed include a \$7 million addition/renovation at Providence Public Library, a \$6 million addition/renovation at Miriam Hospital in Providence, a \$4 million surgical pavilion at South County Hospital in Wakefield, R.I., and a \$10 million office/R&D facility for Digital Equipment in Maynard, Mass. Under construction is the Bristol County Jail in Dartmouth, Mass. <i>Thomas P. Dimeo, Chmn.; Harry C. Van Matre, Pres.</i>	45 (—) \$132.76 Batson-Cook Co. P.O. Box 151 West Point, GA 31833 (404) 643-2101 Current projects include the \$42 million Northpark office building in Atlanta, two \$4 million greenhouses in Atlanta and in Pine Mountain, Ga., an \$18 million facility at Emory Hospital in Atlanta and a \$12 million industrial facility for Knauf Fiberglass in Lanett, Ala. Revenues were entirely from general contracting. <i>Cliff C. Glover, Chmn., CEO</i>	50 (—) \$110.00 The Pinkerton and Laws Co. 875 Douglas Road N.E. Atlanta, GA 30342 (404) 256-1000 Current projects include the nine-story 1300 Parkwood office building in Atlanta; the 294,000-sq.-ft. Kings Market shopping center in Roswell, Ga.; a 149-unit Courtyard by Marriott in Fort Myers, Fla.; a 107,000-sq.-ft. Coca-Cola plant addition and renovation in College Park, Ga.; and a three-story Fairfield Inn motel in Orlando. Subsidiary of the French-based Societe Auxiliaire d'Entreprises. <i>William R. Collins, CEO</i>

SPECIALTY CONTRACTORS

LEADING SPECIALTY CONTRACTORS' BILLINGS HOLD STEADY

Total billings in 1988 — \$1.9 billion — drop only 2 percent; commercial, industrial and institutional work all rise

1 (1) \$391.02 Fischbach Corp. 485 Lexington Ave. New York, NY (212) 986-4100 Major offices are located in Boston, Washington, D.C., Dallas, Denver and Los Angeles. Subsidiaries of this publicly held company are Fischbach and Moore Inc., Natkin Group Inc. and Moore International Corp. Activity includes 20 percent industrial, 19 percent institutional and 18 percent commercial. Staff totals 12,000. <i>A.R. Manville, Pres. CEO</i>	4 (5) \$120.00 The PCI Group Inc. 232 W. 38th St. Houston, TX 77018 (713) 695-9770 Firm was listed as Partners Construction last year. Firm specializes in interior contracting and all finish trades, including flooring, millwork and wall coverings. Among its subsidiaries are Partex Interior Construction Inc. and Contracto Floor Covering Inc. An interior build-out at the 30-story NBC Bank Plaza in San Antonio was a recent project. <i>A. A. Cucolo, Pres., CEO</i>	
2 (4) \$140.00 Limbach Constructors Inc. 2 Northshore Center Pittsburgh, PA 15212 (412) 359-3809 Firm has offices located around the country, including Boston, Detroit and Los Angeles. Recent projects include the Palace at Auburn Hills, a new arena for the Detroit Pistons in Auburn Hills, Mich., and the Orlando Arena in Orlando, Fla. Activity was 55 percent industrial and 45 percent commercial. Government projects were 20 percent of activity and reconstruction was 10 percent. <i>Claudio Elia, Pres.</i>	5 (6) \$105.75 The Poole and Kent Co. 4530 Hollins Ferry Road Baltimore, MD 21227 (301) 247-2200 Parent firm is Monumental Investment Corp., Baltimore. Firm does mechanical contracting and specializes in government projects, mixed-use projects and hospital laboratory facilities. Firm has Florida offices in Miami, West Palm Beach and Tampa and another in Silver Springs, Md. Activity includes 25 percent commercial, 25 percent institutional and 25 percent industrial. <i>William W. Thomas, Pres.; Raymond C. Jung, Exec. VP</i>	
3 (2) \$134.39 Dynalectric Co. 8300 Greensboro Drive Suite 800 McLean, VA 22101 (703) 556-8000 Billings estimated by BD&C. Firm was purchased by JWP Inc., Purchase, N.Y. Firm's specialty is electrical contracting, primarily for commercial projects but also for institutional and industrial buildings. Firm has offices in cities around the country, including Atlanta, Miami, Denver, Las Vegas and Los Angeles. <i>Larry C. Brookshire, Pres.</i>	6 (10) \$104.80 Cleveland Consolidated Inc. 1281 Fulton Industrial Blvd. Atlanta, GA 30336 (404) 696-4550 Other offices are in Little Rock, Ark., and Macon and Savannah, Ga. Firm specializes in industrial contracting for paper, chemical, manufacturing and food and beverage industries. Staff of 89 includes two registered mechanical engineers and four registered electrical engineers. Industrial buildings comprised 70 percent of activity, followed by commercial and institutional buildings, both comprising 5 percent. <i>J.R. Cleveland Jr., Pres.</i>	7 (8) \$97.00 Anson Industries 1559 Anson Drive Melrose Park, IL 60160 (312) 681-1300 Firm's specialties include drywall, acoustical ceilings, spray fireproofing, poured roof decks and structural floor decking. Activity is 65 percent commercial, 20 percent industrial and 15 percent institutional. Reconstruction accounted for 20 percent of work and government projects accounted for 5 percent. <i>Charles M. Fritz, Chmn., CEO</i>
What is the Specialty Contractors' Outlook for Revenues in 1989? 46% expect an increase 27% expect the same 27% expect a decrease	Breakdown of the Specialty Contractors' Construction Commercial 50% Industrial 25% Institutional 14% Other 11%	8 (9) \$95.00 The Western Group 1637 N. Warson Road St. Louis, MO 63132 (314) 427-6733 Firm is recognized for exterior masonry restoration. Among its subsidiaries are Western Waterproofing Co. Inc. and Brisk Waterproofing Co. Inc. Recent projects include the Woolworth Building in New York City, Water Tower Place in Chicago and the Key West Lighthouse in Key West, Fla. Firm has 37 offices nationwide, including those in Chicago, Dallas, Honolulu and Minneapolis. <i>George Bishop, Chmn.; Ben Bishop, CEO</i>

SPECIALTY CONTRACTORS

9 (—) \$88.11 Air Conditioning Co. 6265 San Fernando Road Glendale, CA 91201 (818) 244-6571 Firm is a new addition to the listing this year. Firm designs and installs HVAC systems for high-rise office buildings and shopping centers. Activity was 90 percent commercial, 5 percent institutional and 5 percent industrial. Reconstruction accounted for 5 percent of activity in 1988. Other California offices include San Carlos and San Diego. Another branch is located in Seattle. <i>Theodore M. Seidman, Pres.</i>	13 (—) \$60.07 Murphy Company Mechanical Contractors and Engineers 1340 N. Price Road St. Louis, MO 63132 (314) 997-6600 Firm is a new addition to the listing this year. Fiscal year ended March 31, 1988. Recent projects include the Metropolitan Square Office Building in St. Louis and the Missouri Correctional Facility in Potosi. Activity includes 55 percent industrial and 20 percent commercial. Government projects accounted for 5 percent of activity. <i>James J. Murphy Jr., Pres.</i>	 <i>Murphy Co. performed the plumbing and HVAC work at the MCI Building in St. Louis. The company is new to the listing and ranked 13th.</i>
10 (12) \$75.00 Guarantee Electrical Co. 3405 Bent Ave. St. Louis, MO 63116 (314) 773-1111 Fiscal year ended September 1988. Firm added new subsidiary SONACOM Communications and Sound Inc., which specializes in the design and installation of data networking, fire alarm and sound and video systems. Other subsidiaries include Guarantee Interiors and Guarantee Industrial Systems Inc. Landmark Bank in St. Louis is a recently completed project. <i>Charles W. Oertli, Chmn.; Fred Oertli Jr., Pres.</i>	14 (16) \$60.00 The Fisk Group 111 T.C. Jester Suite 200 Houston, TX 77007 (713) 868-6111 Other offices are located in Dallas and New Orleans. Firm is recognized for electrical work in high-rise office buildings, hospitals and computer facilities. Recent projects include 500 Boylston Street, a mixed-use development in Boston, the Figueroa Office Tower in Los Angeles and the Ben Taub Hospital in Houston. Revenues are expected to increase by 10 percent in 1989. <i>Wallace Brasuell, Pres.</i>	17 (14) \$56.03 LECO Enterprises Inc. 45 Rockefeller Plaza New York, NY 10111 (212) 246-8000 Revenues estimated by BD&C. LECO and its subsidiaries are known for performing all types of electrical construction. Among its subsidiaries are Lord Electric Co. Inc., Halfhill Electric Co. Ltd. and Lord Electric Co. of Puerto Rico Inc. <i>Roberto Gorbea, Pres.</i>
11 (18) \$58.89 Williard Inc. 375 Highland Ave. Jenkintown, PA 19046 (215) 885-5000 Recent Philadelphia projects include the \$17 million Veterans Administration Hospital and the Roxborough Hospital. Activity includes 69 percent commercial, 24 percent institutional and 4 percent industrial. Firm is recognized for mechanical/electrical and sheet metal construction and provides services for commercial and institutional structures. <i>Joseph F. Doody, Pres.</i>	15 (13) \$59.89 University Industries 4464 Alvarado Canyon Road San Diego, CA 92120 (619) 283-3181 Revenues estimated by BD&C. Firm is known for mechanical engineering for commercial, industrial and institutional buildings. Other offices are located in Los Angeles, San Francisco, Seattle and Portland. Among its subsidiaries are University Mechanical & Engineering Contractors Inc., University Mechanical Contractors of Arizona and University Contractors International. <i>D.J. Primuth, Pres., CEO</i>	18 (20) \$53.15 Grunau 101 W. Pleasant St. P.O. Box 479 Milwaukee, WI 53201 (414) 223-6900 Subsidiaries include Grunau Co. Inc., Grunau Fire Protection Systems and Grunau Projects Development. Recent projects include the Disney/MGM motion picture studios in Orlando, Fla., and the Grand Floridian Hotel, also in Orlando. The staff of 107 includes 35 engineers. Activity is 53 percent commercial, followed by 20 percent industrial and 15 percent institutional. <i>Gary P. Grunau, Chmn., Pres.</i>
<i>Eight of the largest Specialty Contractors anticipate an increase in revenues in 1989. Five of the firms expect revenues to decrease in the coming year.</i>		
12 (—) \$61.47 Spaw-Glass Construction Inc. P.O. Box 25025 Houston, TX 77265 (713) 529-4451 Firm is a new addition to the listing this year, but was ranked last year in the General Contractor category. Firm has Texas offices in Dallas, San Antonio and Austin and others in Tampa, Fla., and Springfield, Va. Activity includes 24 percent commercial and 19 percent industrial. Airport terminals and maintenance buildings and sport and leisure facilities comprised 53 percent of activity. <i>Cecil O. Windsor, Pres.</i>	16 (—) \$59.00 Butler Construction P.O. Box 419917 Kansas City, MO 64141 (816) 968-3700 Firm is a new addition to the listing this year and is also listed in the Design/Builders category. Firm specializes in the installation of steel frame structures. Parent firm is Butler Manufacturing and subsidiaries include Butler Construction in Kansas City, Mo., and BASCON Inc. in Cincinnati. Activity is 80 percent industrial and 20 percent commercial. Staff totals 114 and includes eight registered engineers. <i>William L. Johnsmeyer, Pres.</i>	20 (17) \$45.00 Cobbledick-Kibbe Inc. 1001 Marina Village Parkway Alameda, CA 94501 (415) 769-6464 Firm is a glazing and curtain wall contractor specializing in new construction, renovations and interiors for commercial and industrial buildings on the West Coast. Other California offices are located in Sacramento, San Jose, San Francisco and Anaheim. Activity is 70 percent commercial and 30 percent institutional. <i>Herbert M. Elliott, Pres., CEO, Robert L. Jenkins, Vice Chmn.</i>

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ENVIRO-SCAPE



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CR Meyer	150	78	Petersen Aluminum Corporation		
C/S Group	23,105	12,45		55	23
Carborandum Company	100	44	Philips Lighting Co.	24-25	13
Celotex	58-59	25	Plastics Components, Inc.	146	73
Charles Pankow Builders, Ltd.			Precast/Prestressed Concrete Institute	119	54
	159	88			
Chas. T. Main	154	82			
Chicago Faucet Co.	143	70	Reynolds Metals Company	114	51
Cornell Iron Works	144	61	Rhone-Poulenc, Inc.	108	47
Cost of Wisconsin	160	89	Robertson Company, H.H.	IFC-1	1
			Rohm and Haas Co.	46-47	
Dataprint Corporation	141	68	Russwin Division, Emhart Hardware Group	109	48
Dover Elevator Systems, Inc.	98				
Dow Non-Residential	87	35			
DuPont Co. - Hypalon	10-11	6	SRBT Technologies, Inc.	138	65
*Equitable Gas Company	162A	93	Saint Mfg. Co.	156	84
			Senergy	8	5
Fibermesh Co.	151	79	*Southern California Edison	162F	95
Fry Reglet Corporation	145	72	Steelte, Inc.	122	55
			Summitville Tiles, Inc.	107	46
GTE Sylvania, LC Lighting	18-19	10			
			Technical Glass Products	158	86
General Electric - C & I Light.	72	30	Thoro System Products	136	63
General Electric - Zirconline Div.	93	39	Tnemec Co.	137	64
Glidden Co.	50	22	United Engineering	128	57
Goodyear Tire & Rubber Co.	36	19	United States Aluminum Corporation	140	67
Guardsman Products, Ltd.	60	26	USG Interiors, Inc., Access Floor	79	32
HDR	129	58	USG Interiors Inc., Wall Division	4	3
Haskell Co.	70-71	29	United States Gypsum Co., Exterior Durrock	113	50
Haws Drinking Faucet Co.	20	11	U.S. Intec	2-3	2
Interpane Coatings	96	42			
Ispo, Inc.	89	37	Varco-Pruden Buildings	142	69
Jamison Door Company	152	80	Velux, Inc.	77	31
			Vistawall Architectural Products	135	62
Kohler Company	17	9			
LCN Closers	149	76	Walker, a Div. of Butler Mfg. Co.	94	40
Lendis & Gar Powers, Inc.	138	60	Walsh Construction	157	85
Lester B. Knight	99	43	Wayne-Dalton Corp.	BC	91
Liebert Corporation	118	53	Wide-Lite	139	66
Lockwood Greene	80-81	33	Wildeck Mezzanines, Inc.	153	81
			*Won Door Corp.	162G-I	96
Manville Commercial Roofing Systems Div.	110	49	*Regional Advertiser		

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